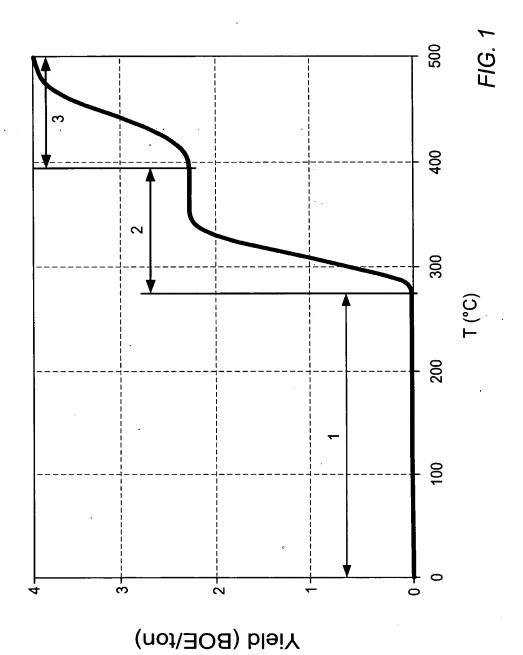
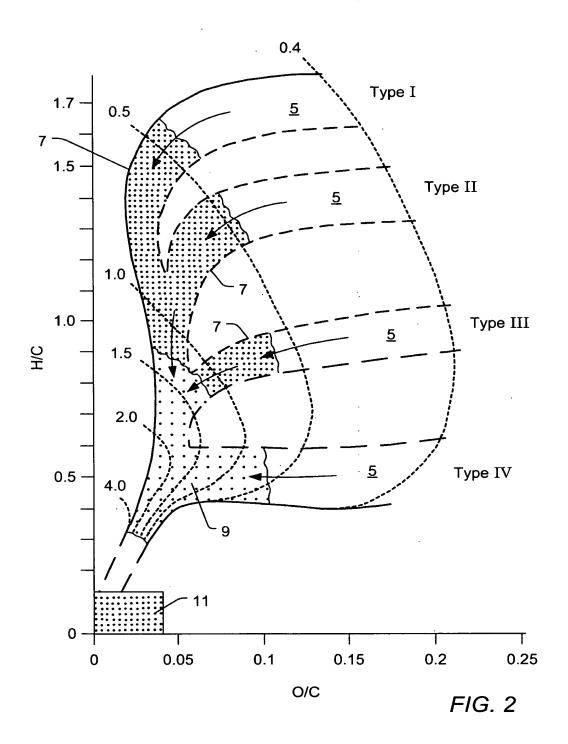
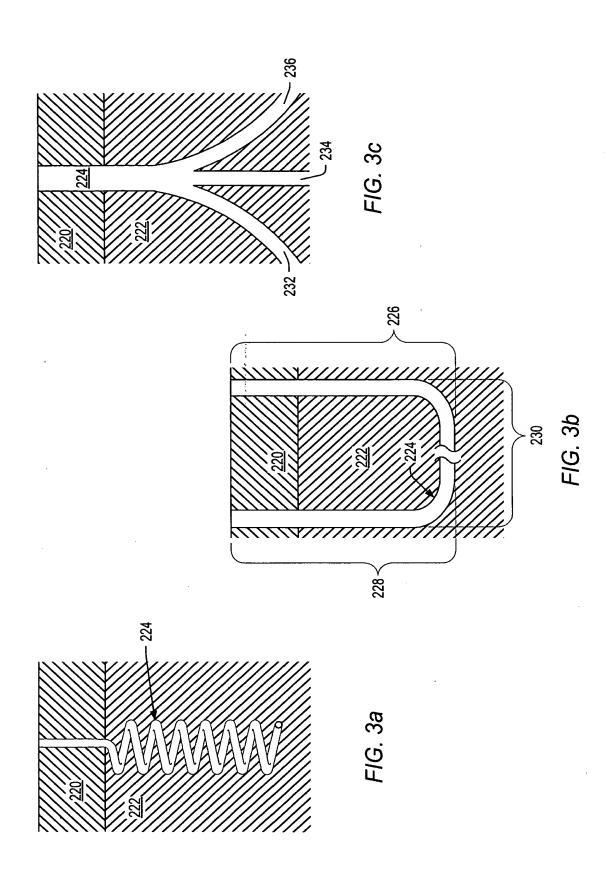
FEB 0 9 2006

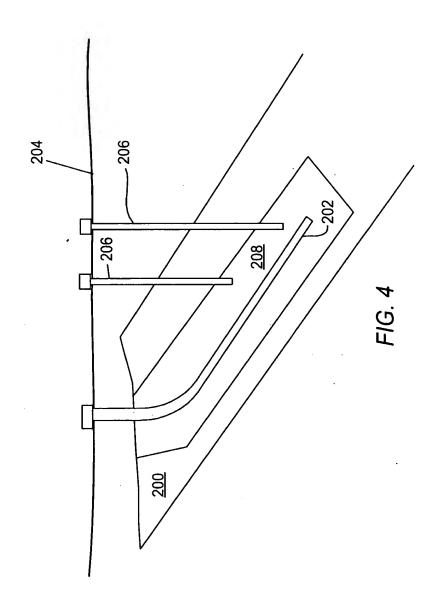
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

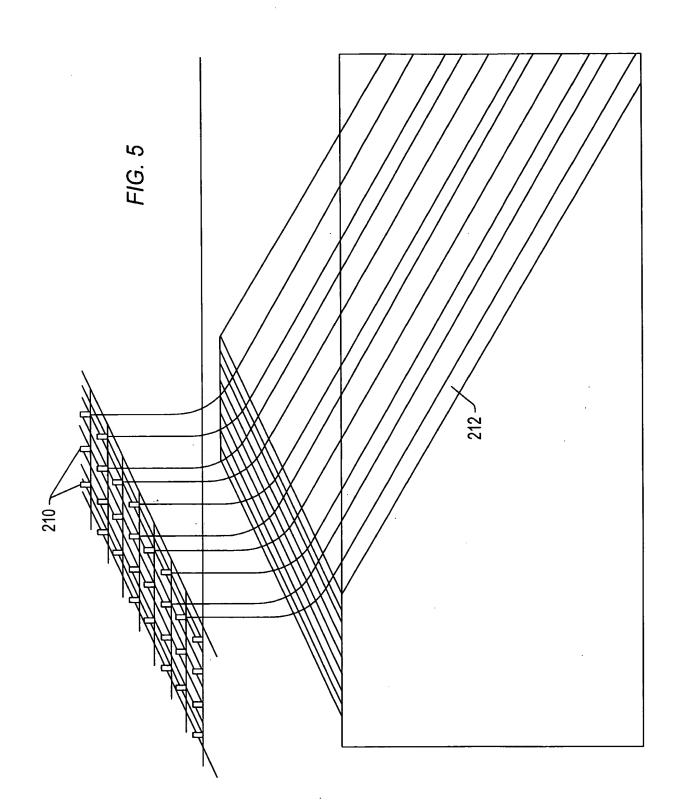
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet











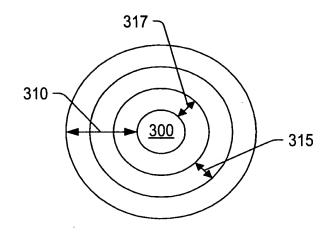


FIG. 6

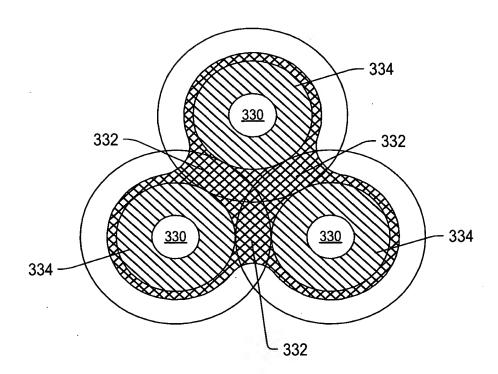
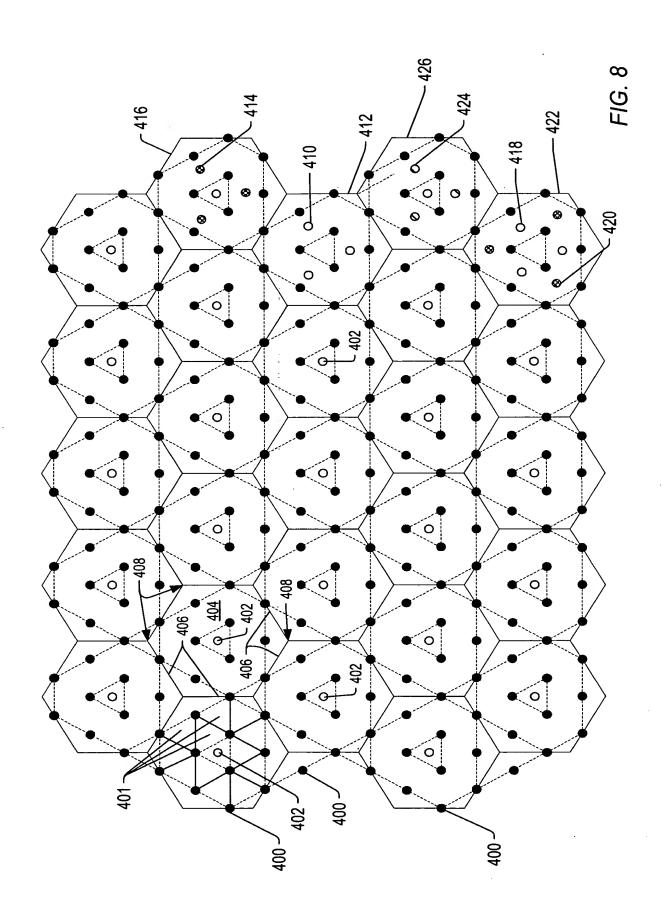
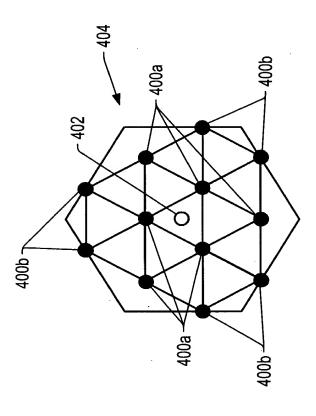
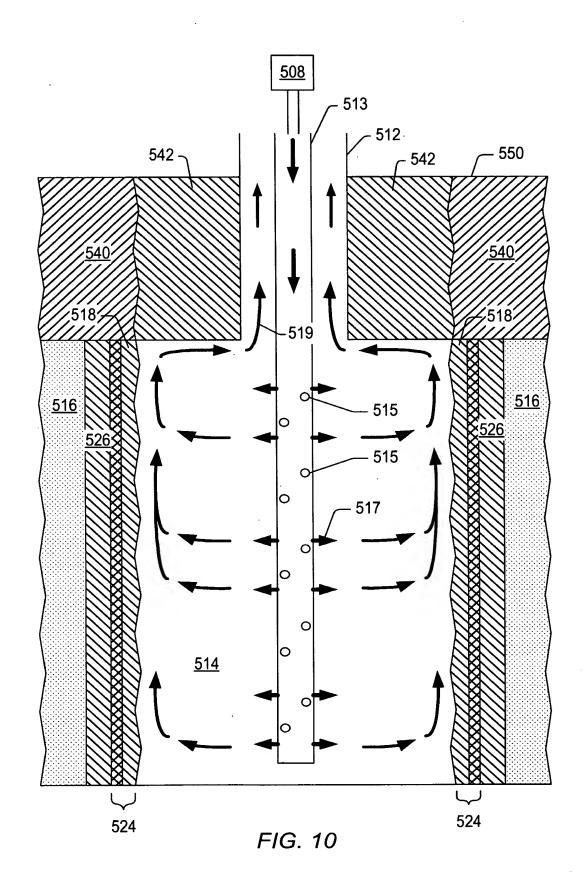


FIG. 7







Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

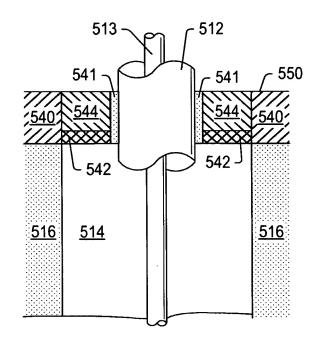


FIG. 11

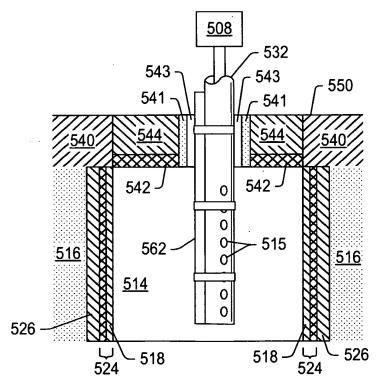


FIG. 12

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

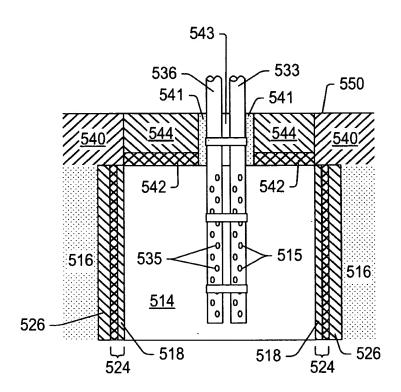


FIG. 13

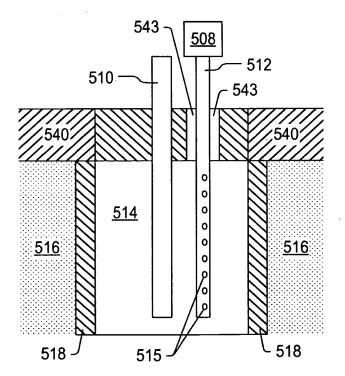


FIG. 14

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

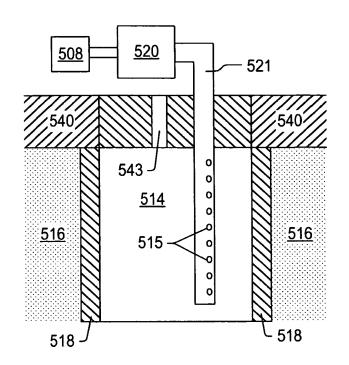
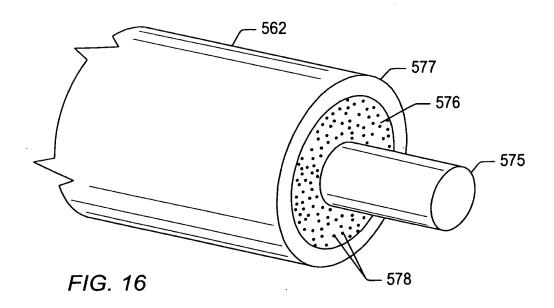


FIG. 15



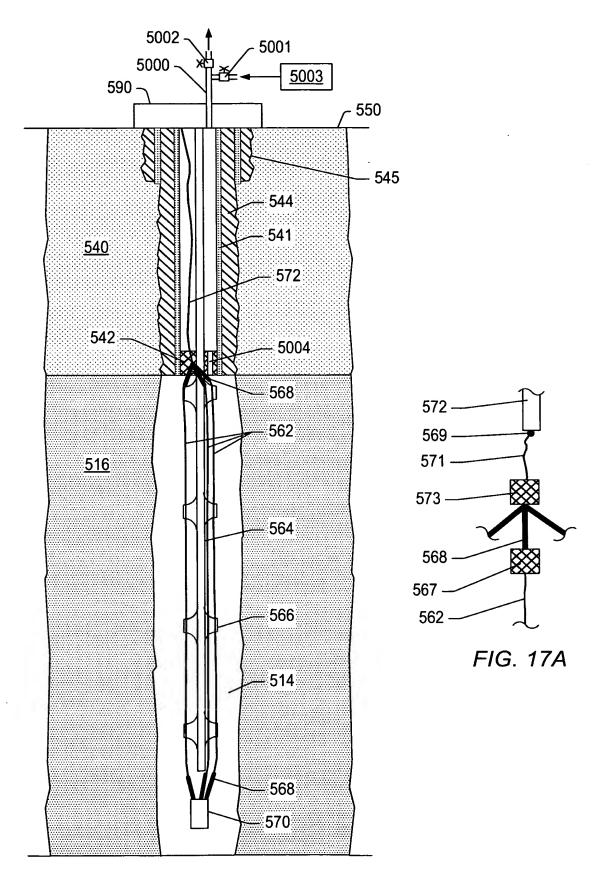
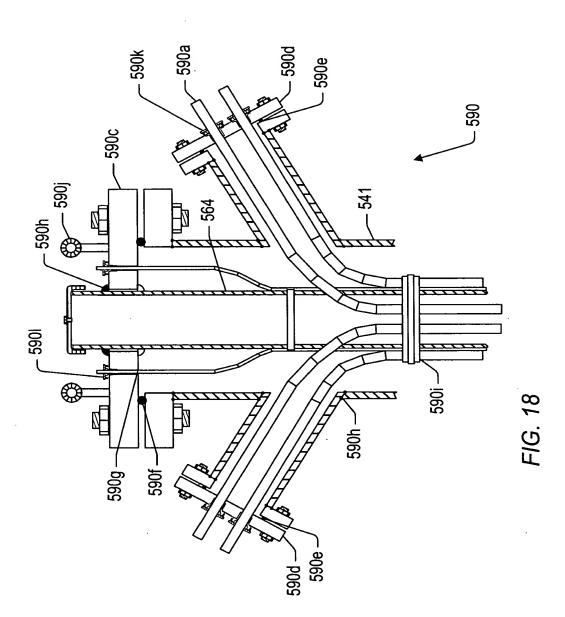


FIG. 17

Title:



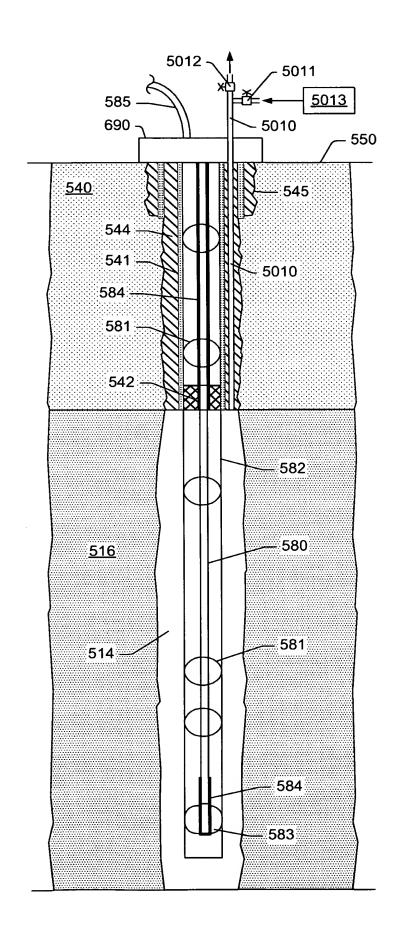
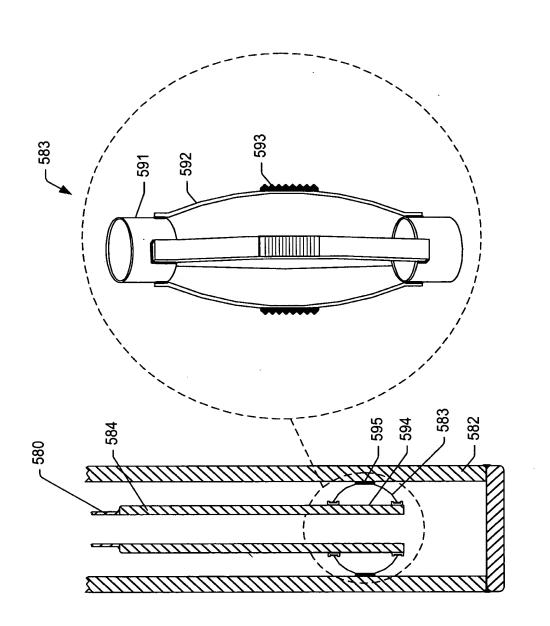


FIG. 19



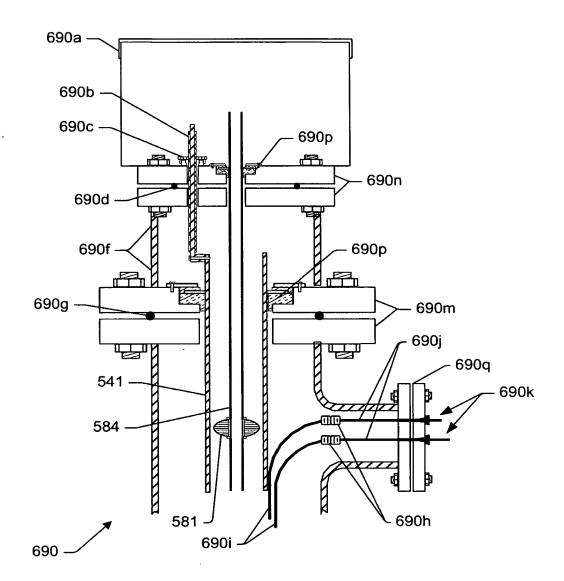


FIG. 21

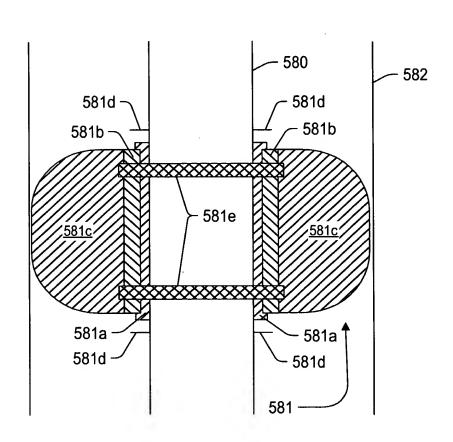


FIG. 22

580 582 581d -<u>581</u> <u>581</u> 581d

FIG. 23a

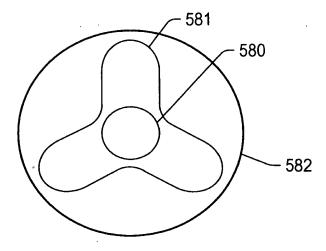


FIG. 23b

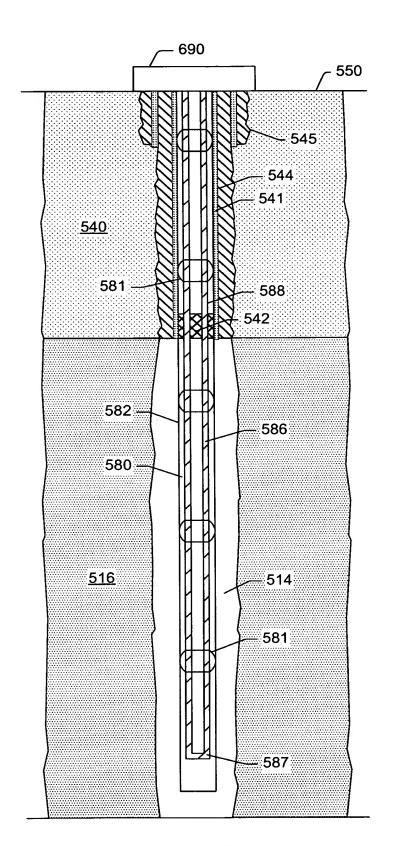


Fig. 24

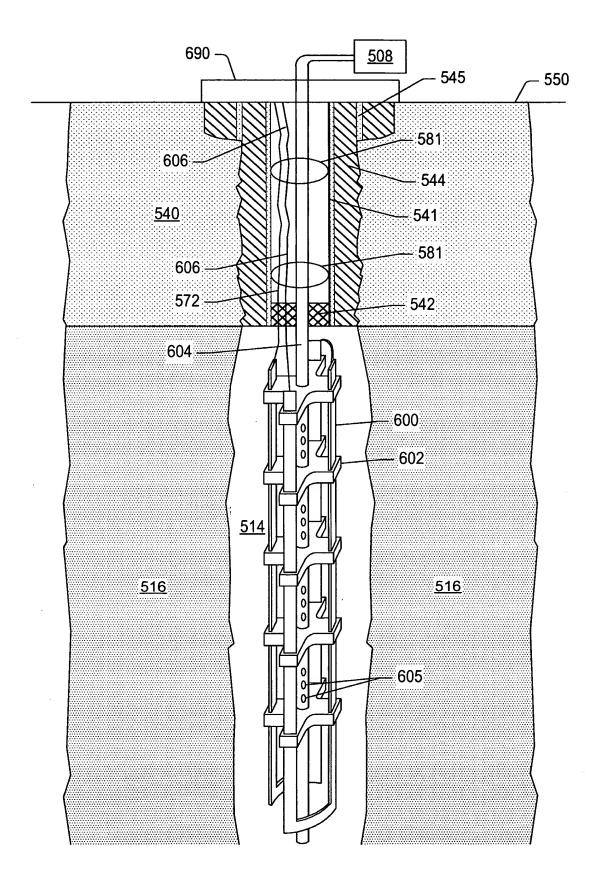


FIG. 25

PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. Title:

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

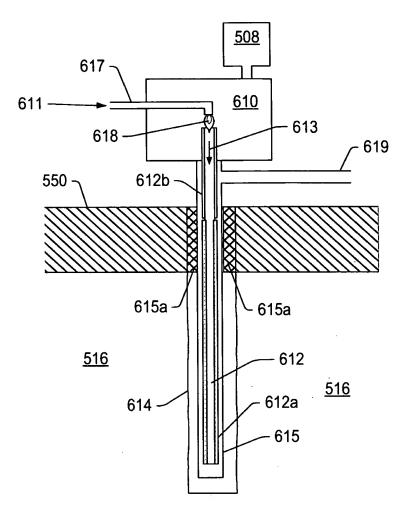


FIG. 26

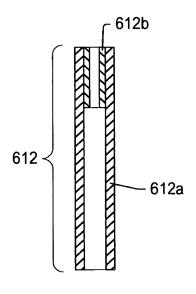


FIG. 27

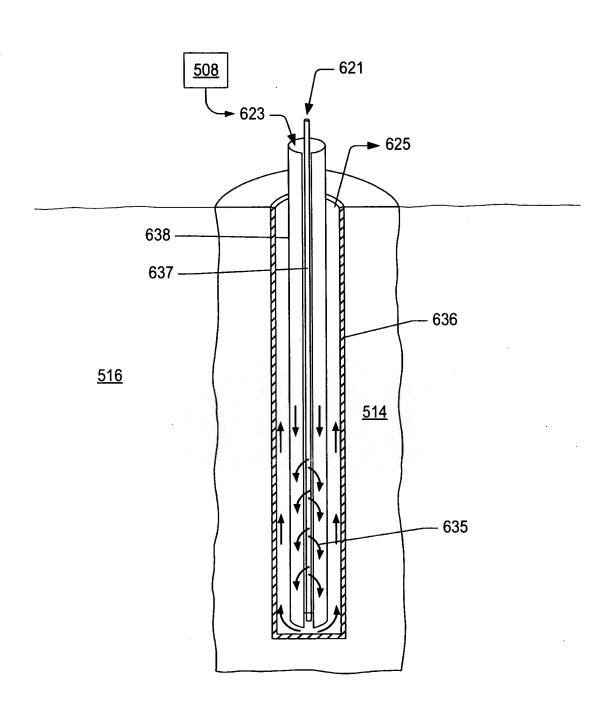


FIG. 28

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

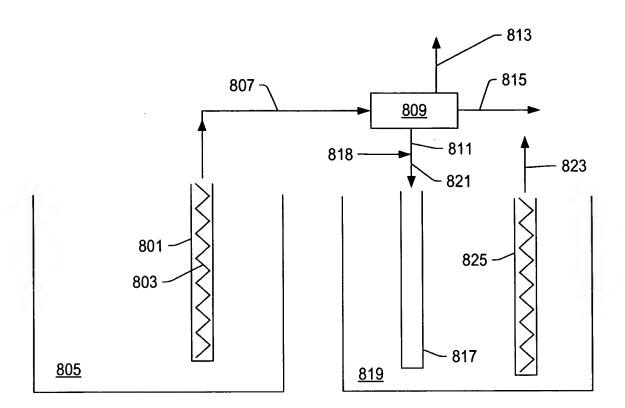


FIG. 29

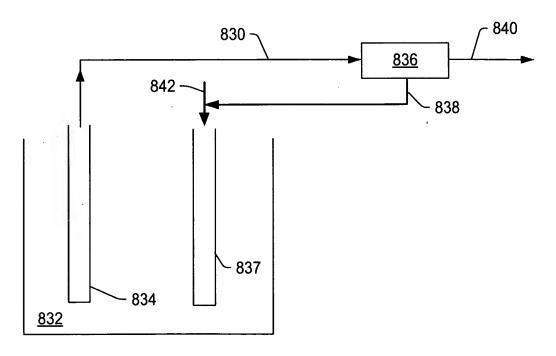


FIG. 30

U.S. Pat. Appl. No.: 09/841,632

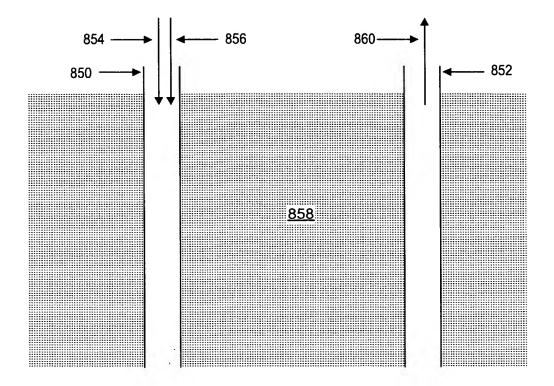
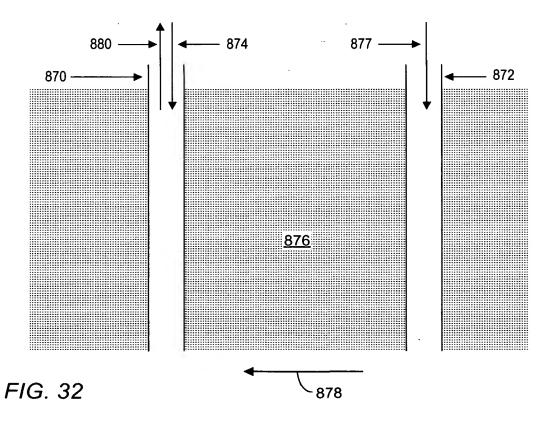


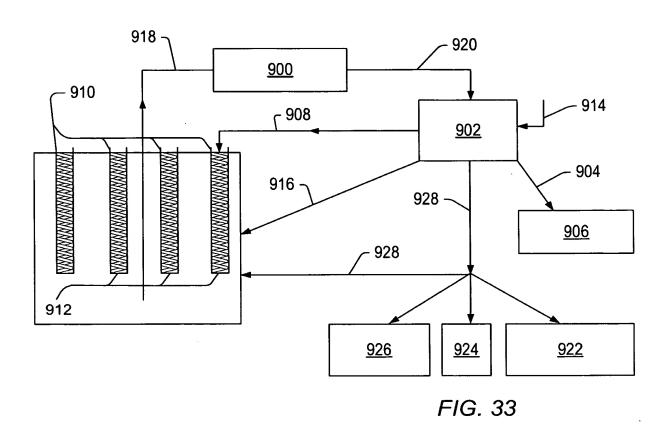
FIG. 31



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



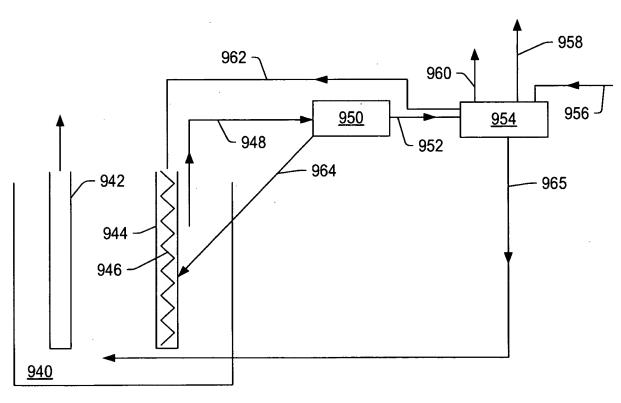


FIG. 34

U.S. Pat. Appl. No.: 09/841,632

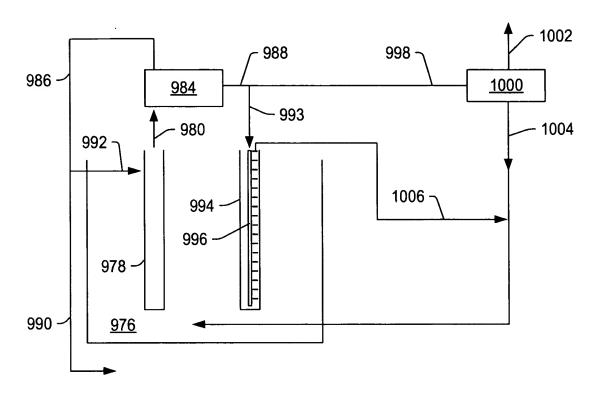
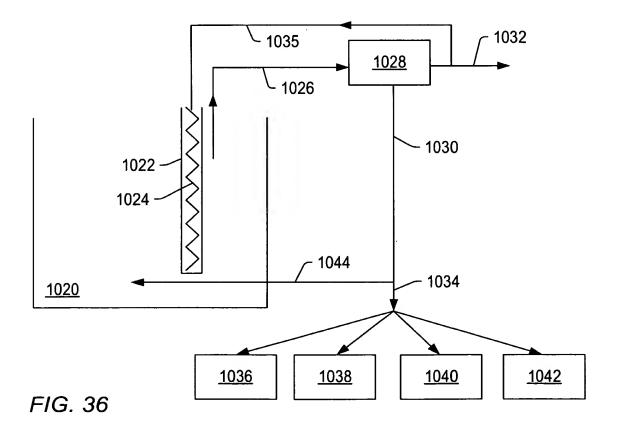


FIG. 35



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

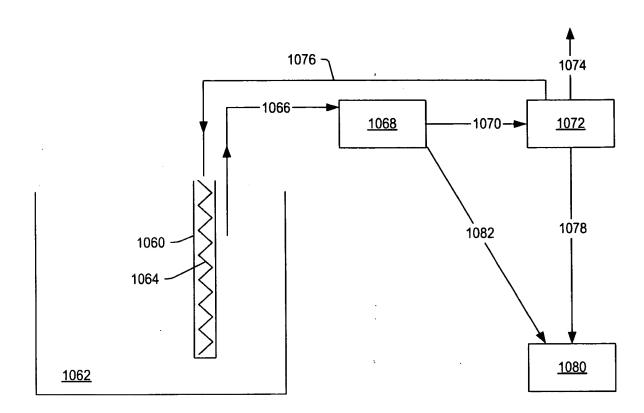


FIG. 37

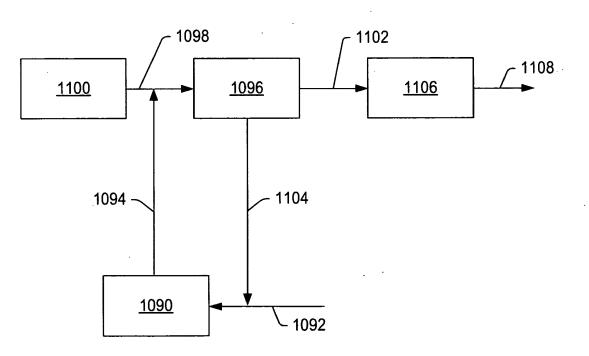
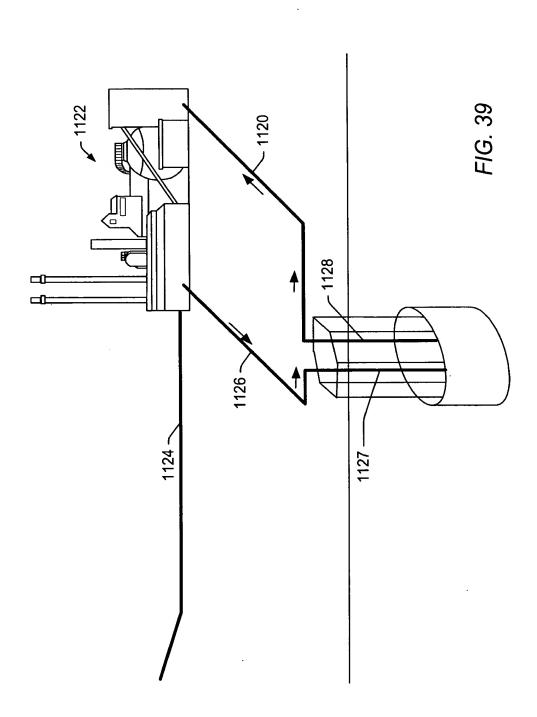
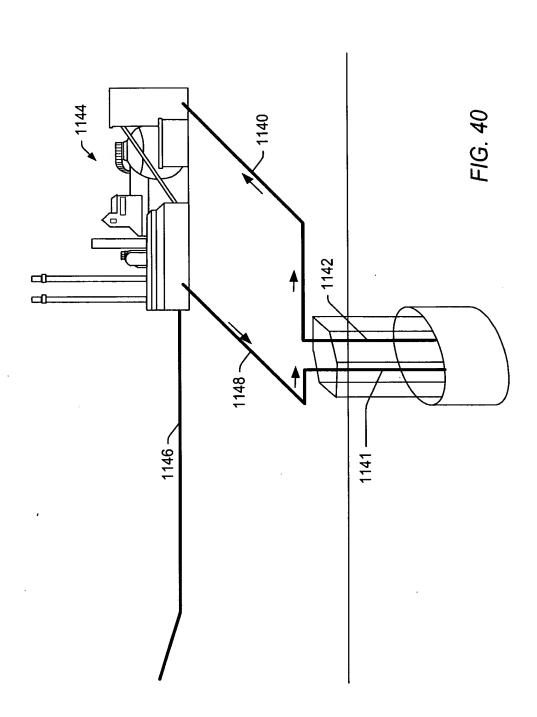
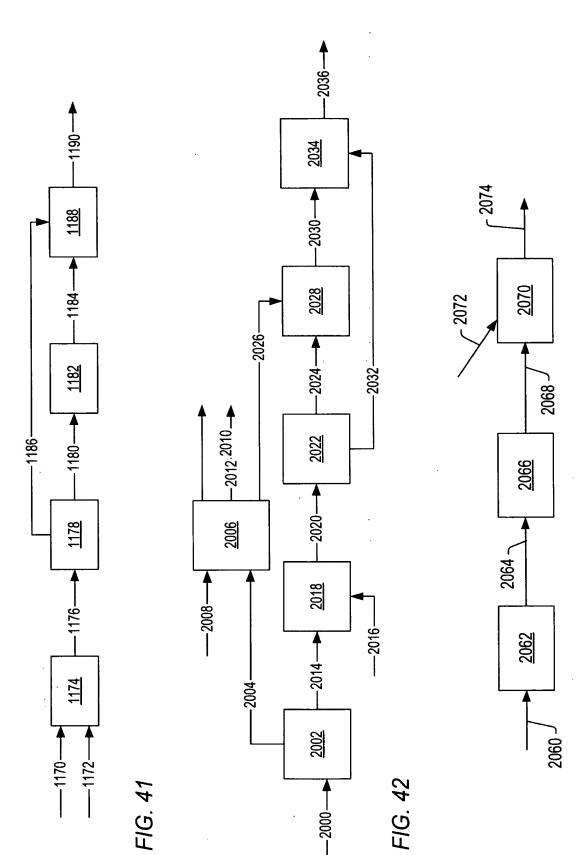
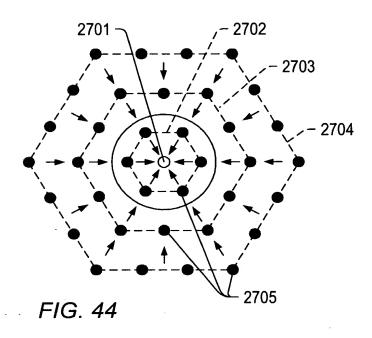


FIG. 38









Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

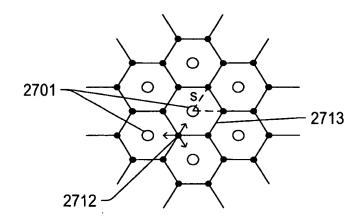


FIG. 45

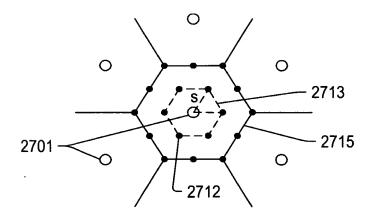


FIG. 46

U.S. Pat. Appl. No.: 09/841,632

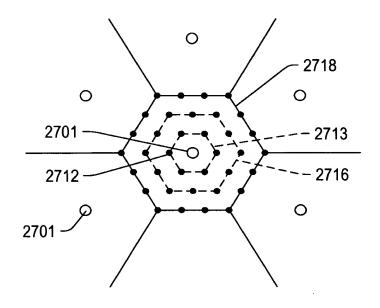


FIG.47

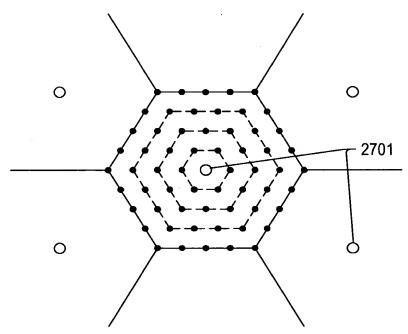


FIG. 48

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

> 2701 - 2730 2732

FIG. 49

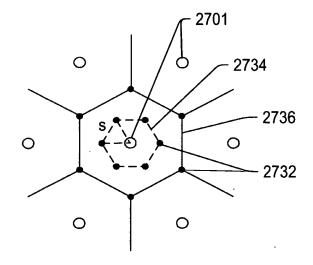
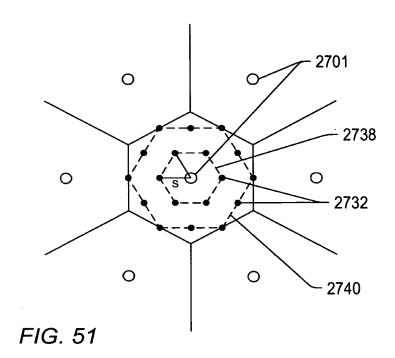
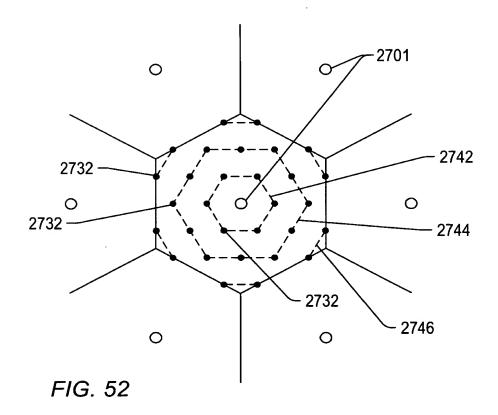


FIG. 50





PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. Title:

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

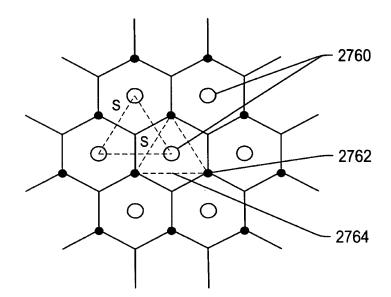


FIG. 53

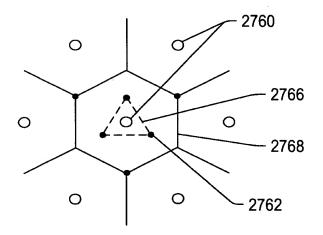


FIG. 54

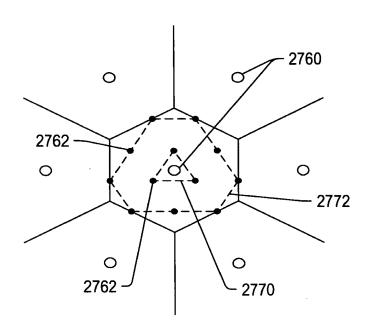
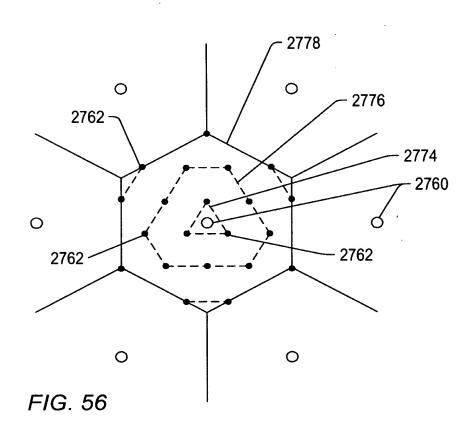
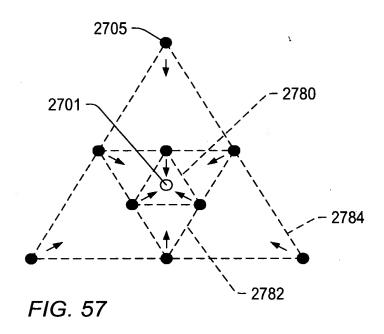
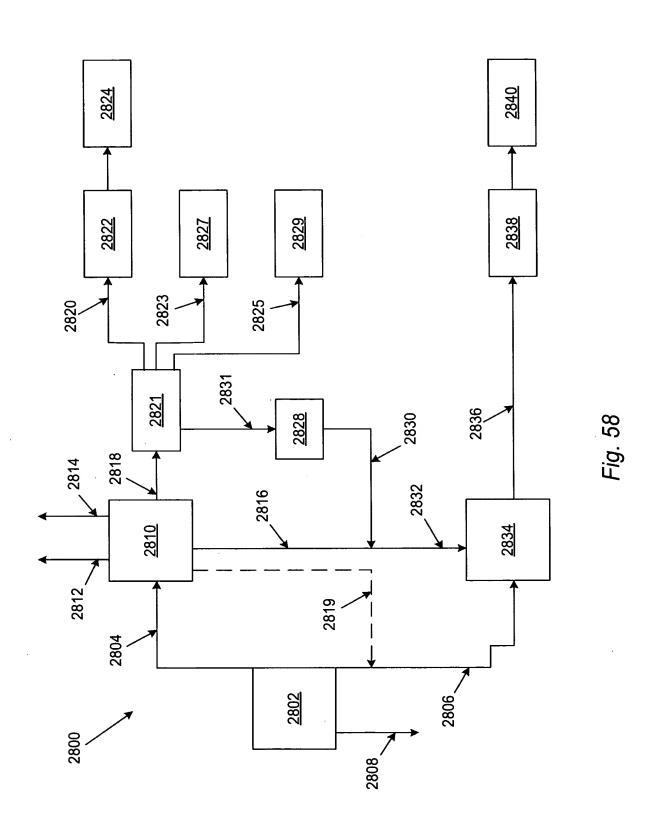


FIG. 55

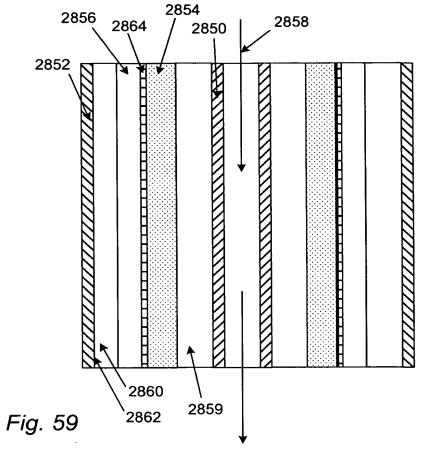


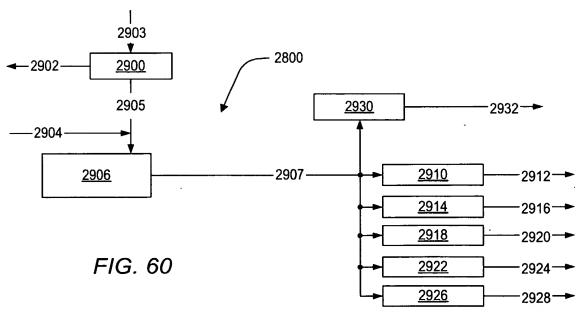




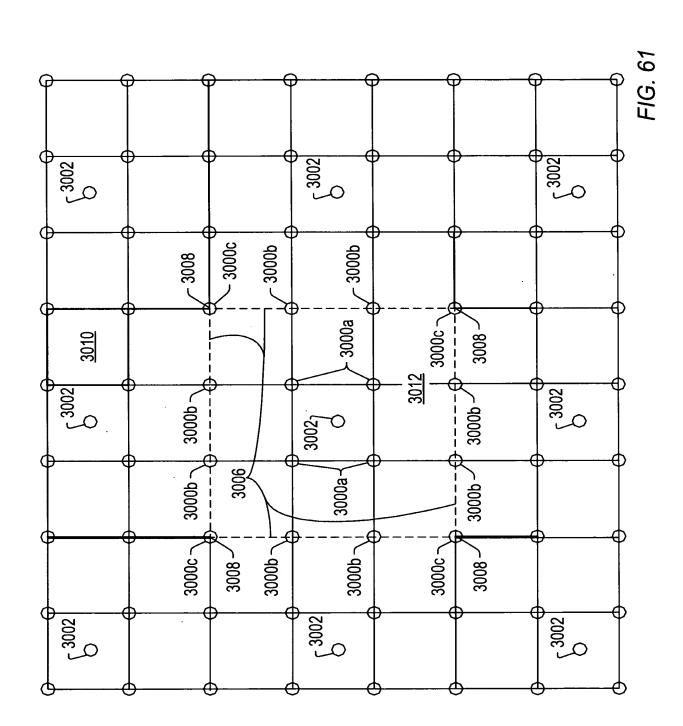
Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632





PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Title: Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

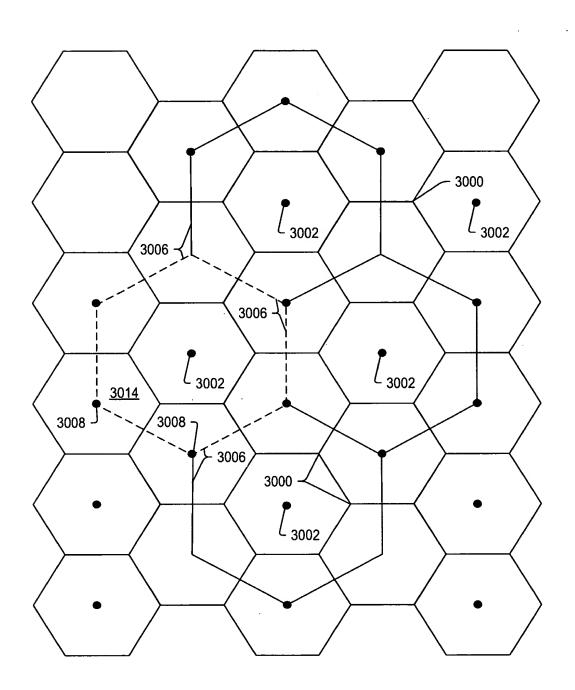


FIG. 62

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

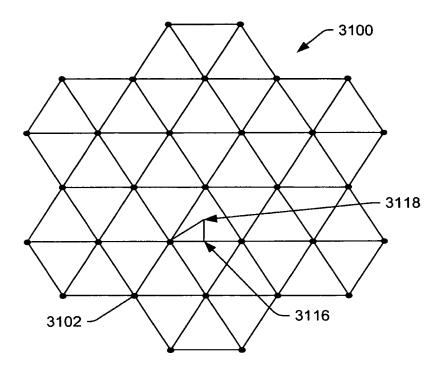
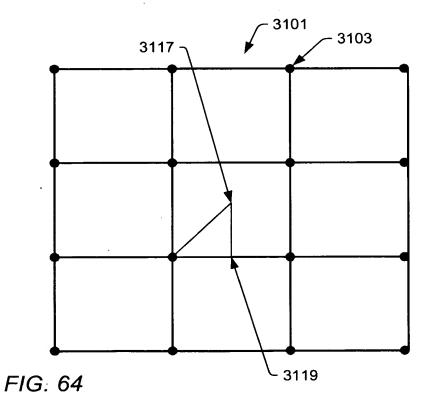
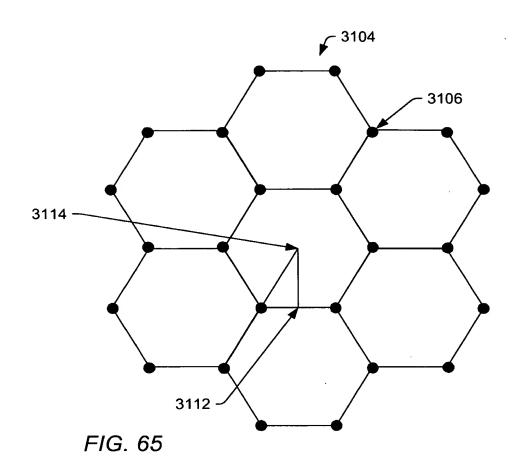


FIG. 63



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

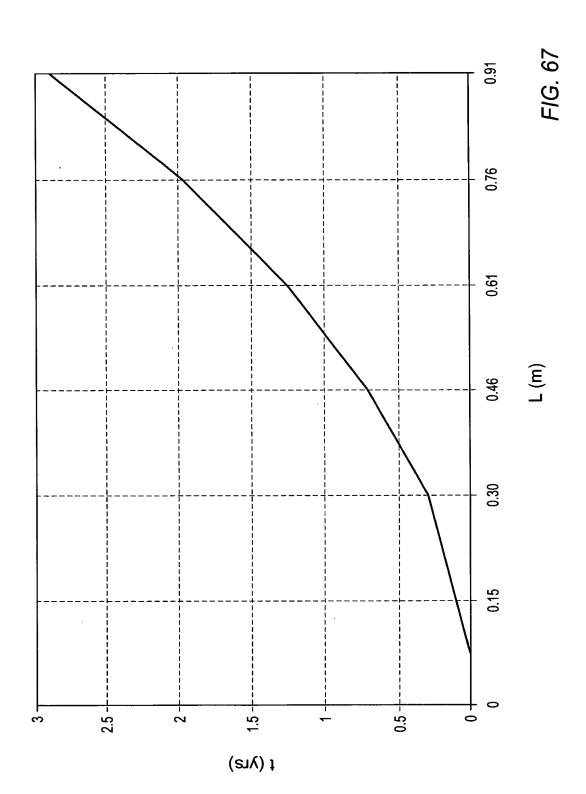
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet



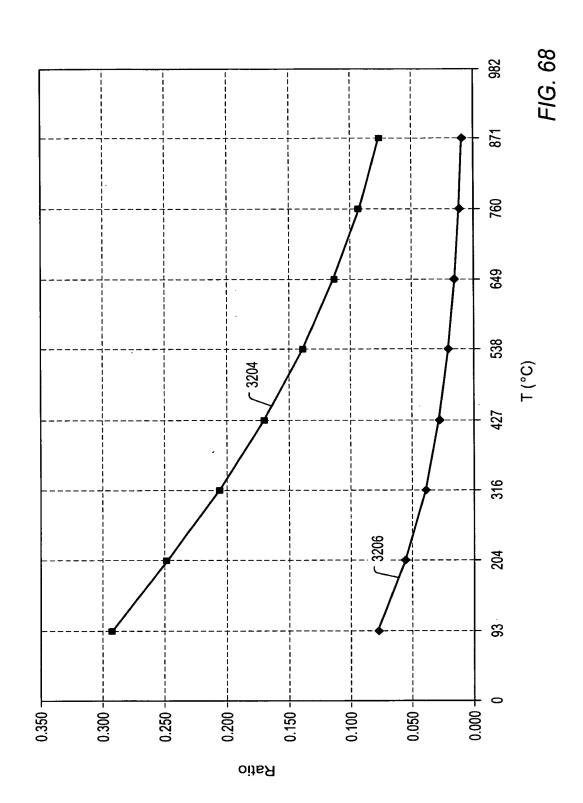
3105 3107 3115. FIG. 66

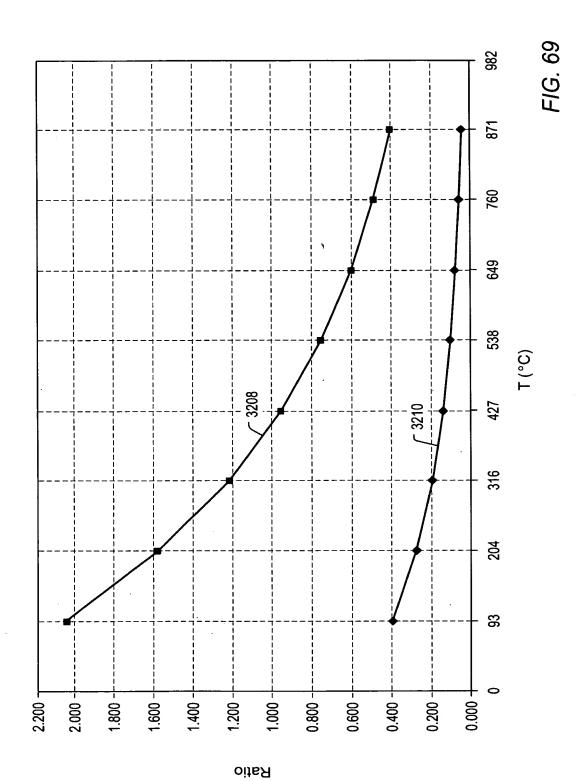
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. Title:

U.S. Pat. Appl. No.: 09/841,632

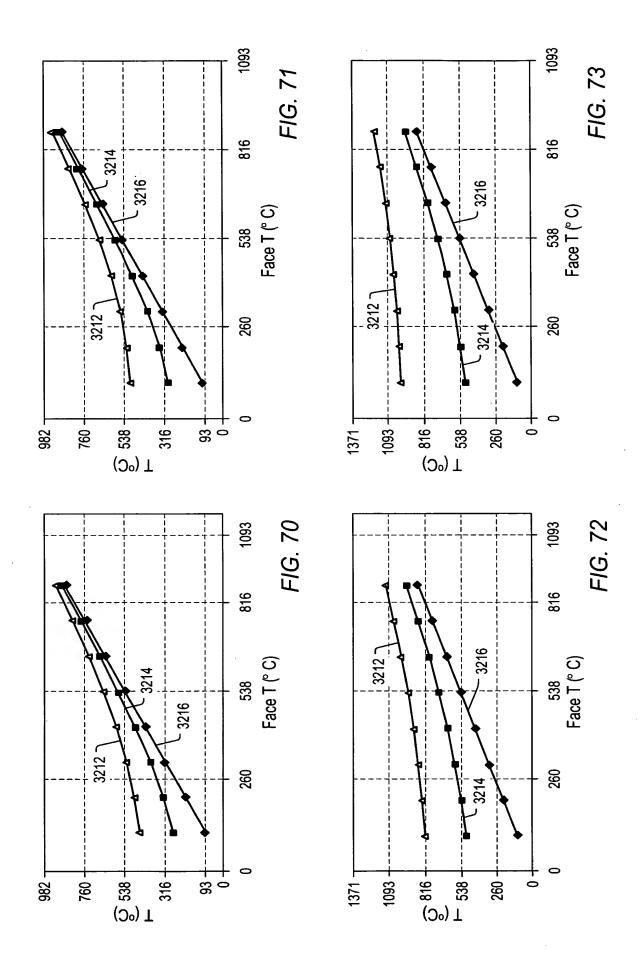


Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

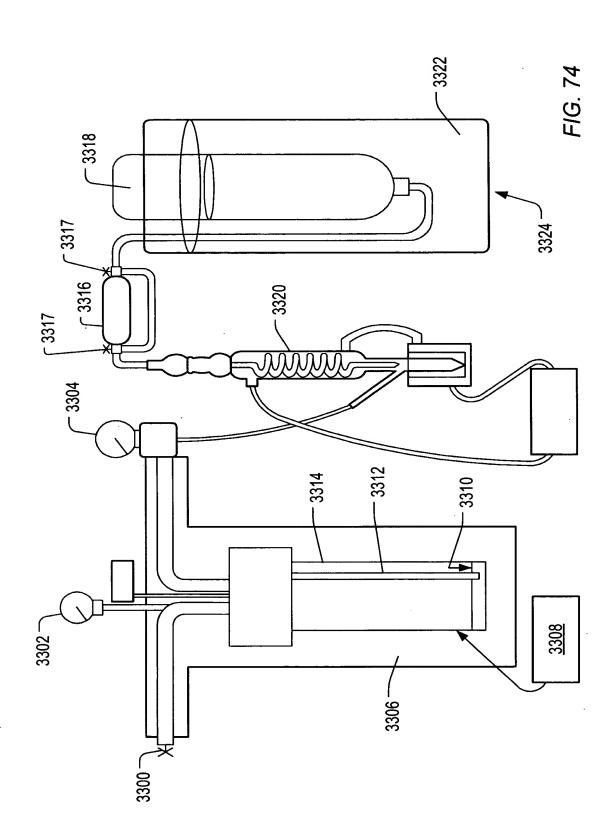




U.S. Pat. Appl. No.: 09/841,632

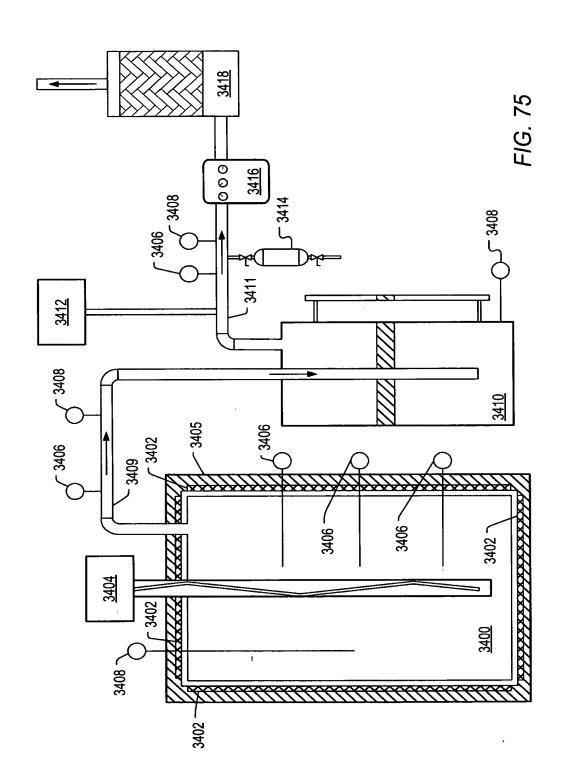


PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet Title:



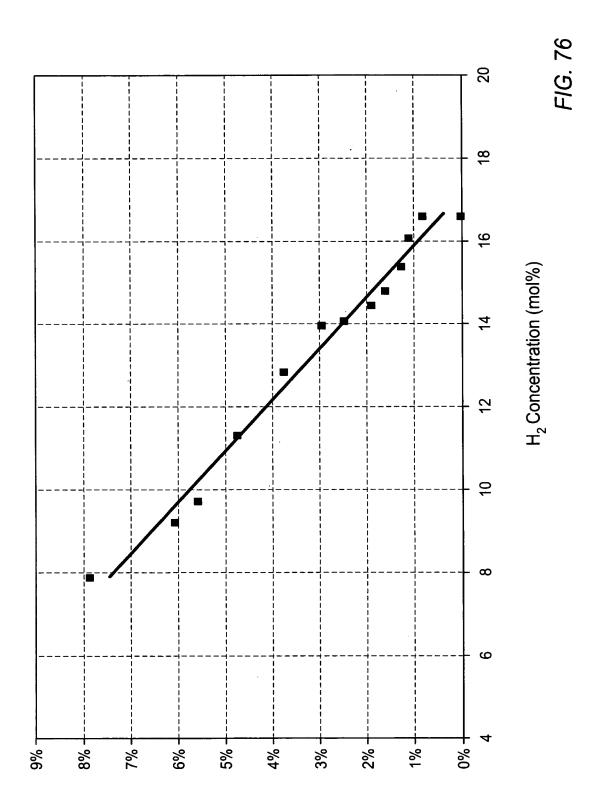
Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

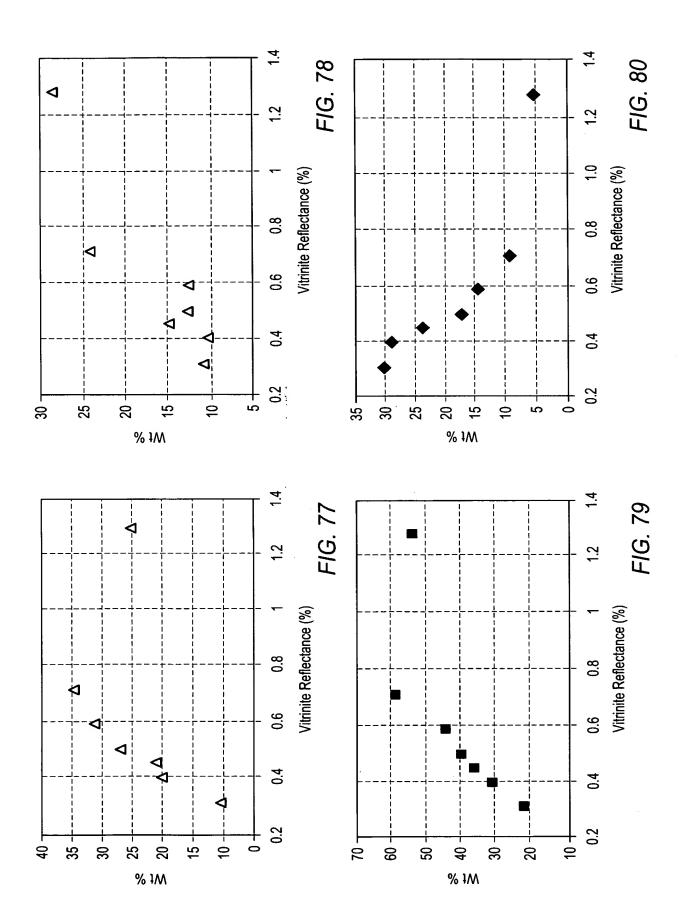
U.S. Pat. Appl. No.: 09/841,632



Ethene/Ethane Molar Ratio

Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

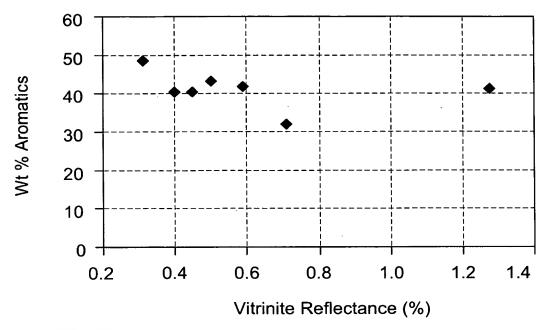


FIG. 81

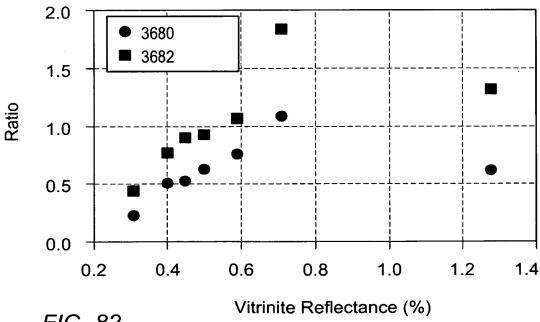
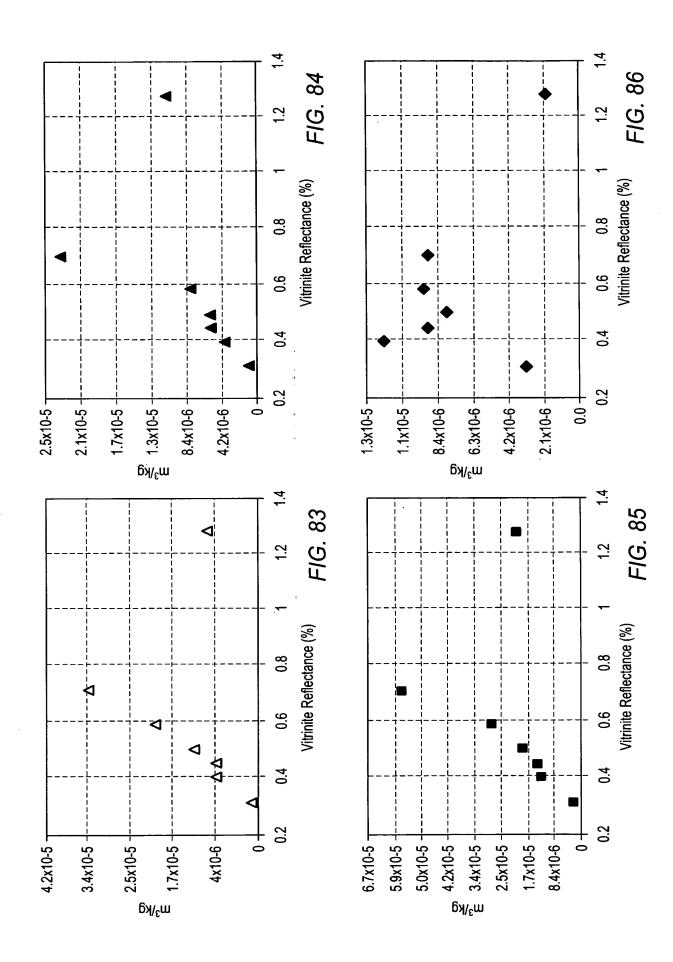


FIG. 82

Inventors: Vinegar et al.

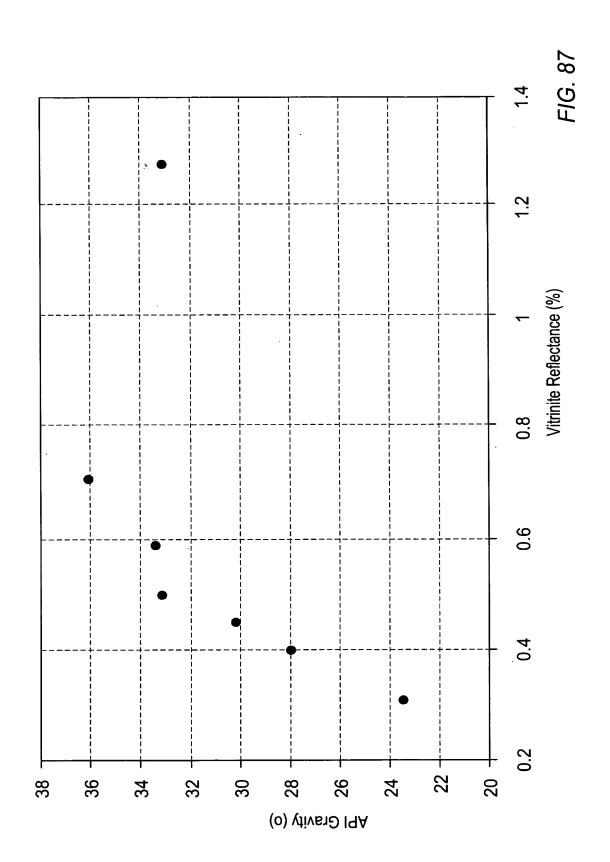
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet



PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

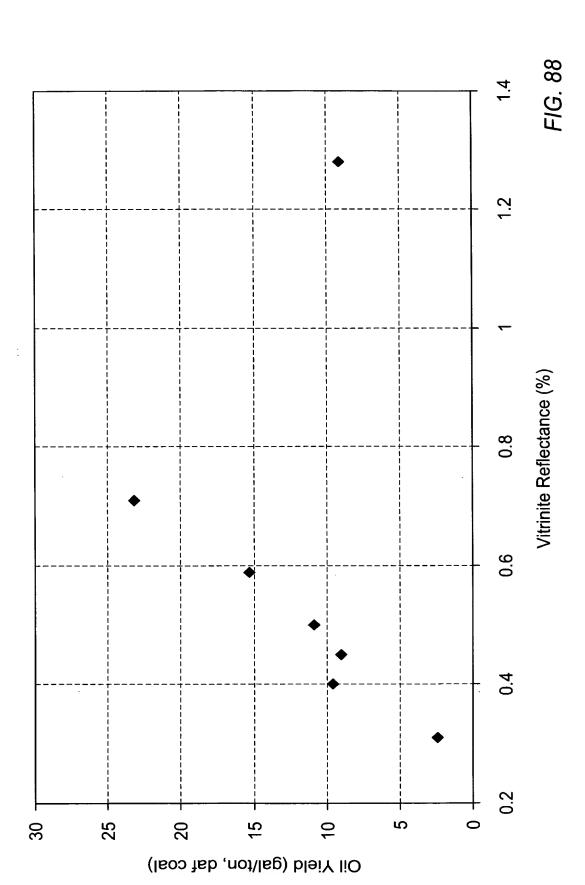
U.S. Pat. Appl. No.: 09/841,632



PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

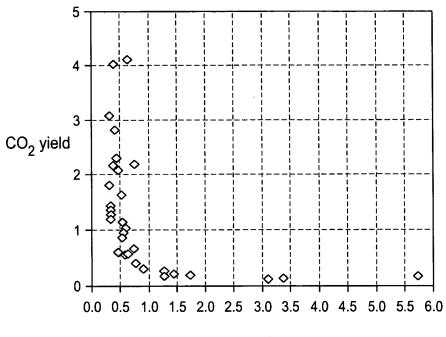
Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



Vitrinite Reflectance

FIG. 89

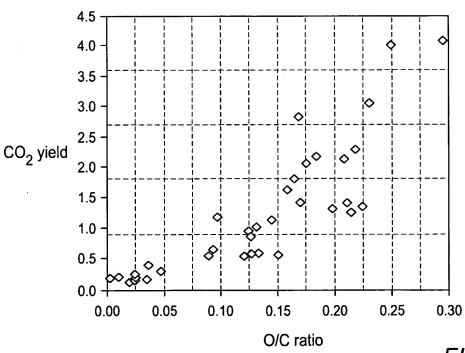
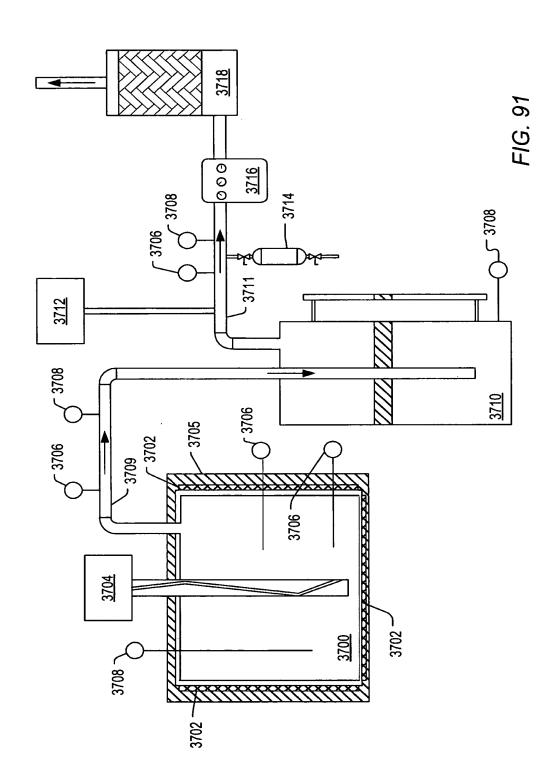
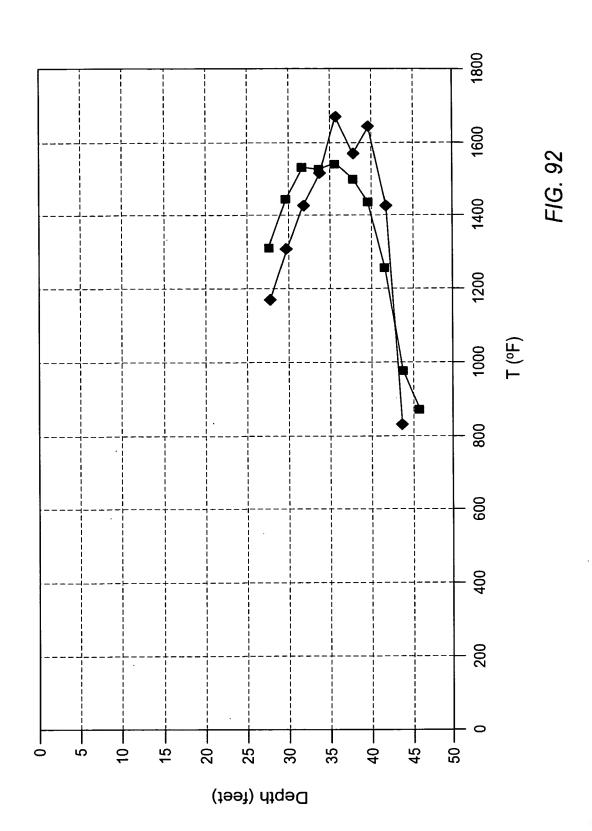
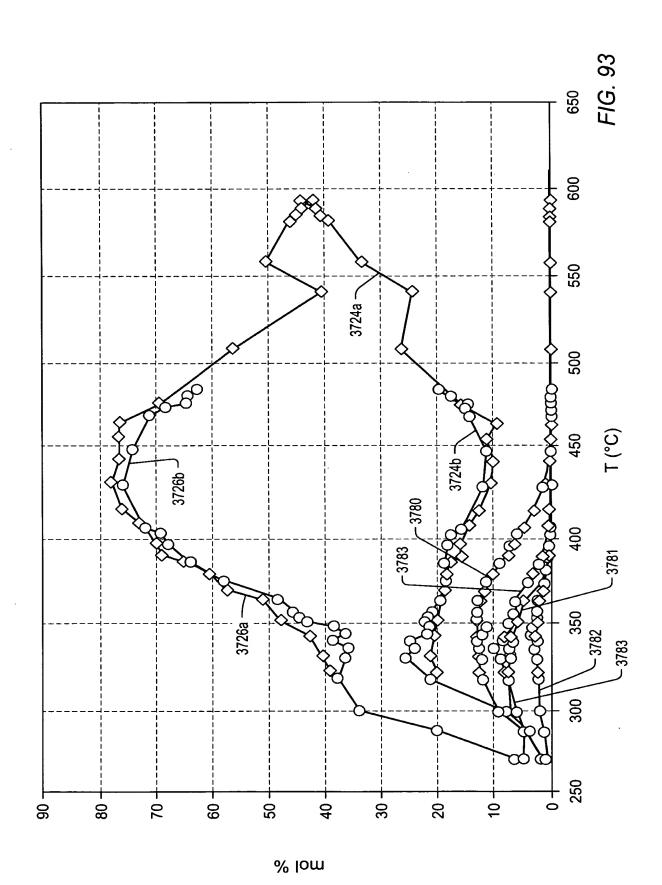


FIG. 90

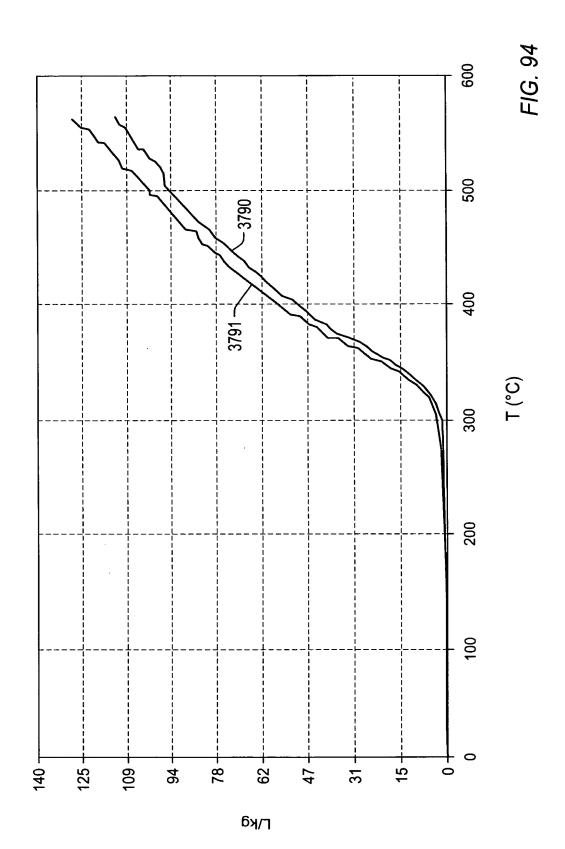


PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
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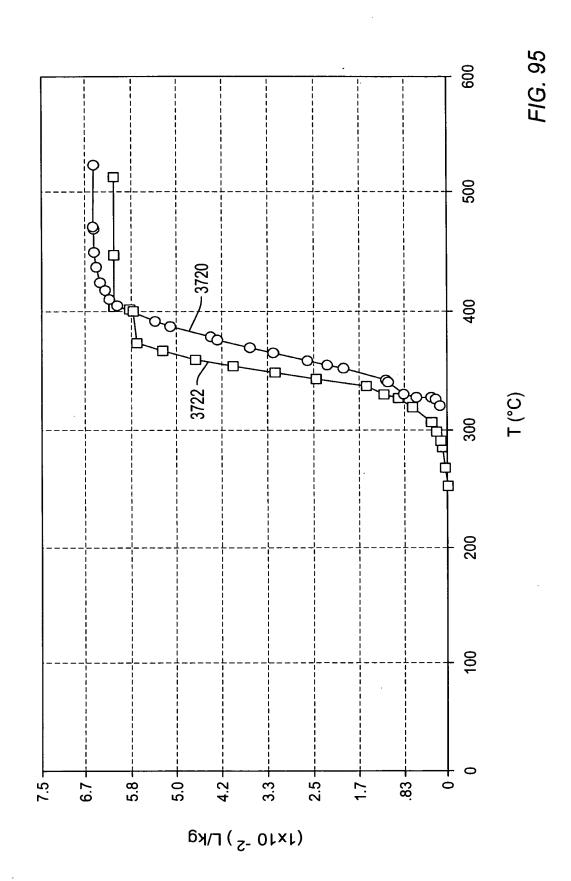




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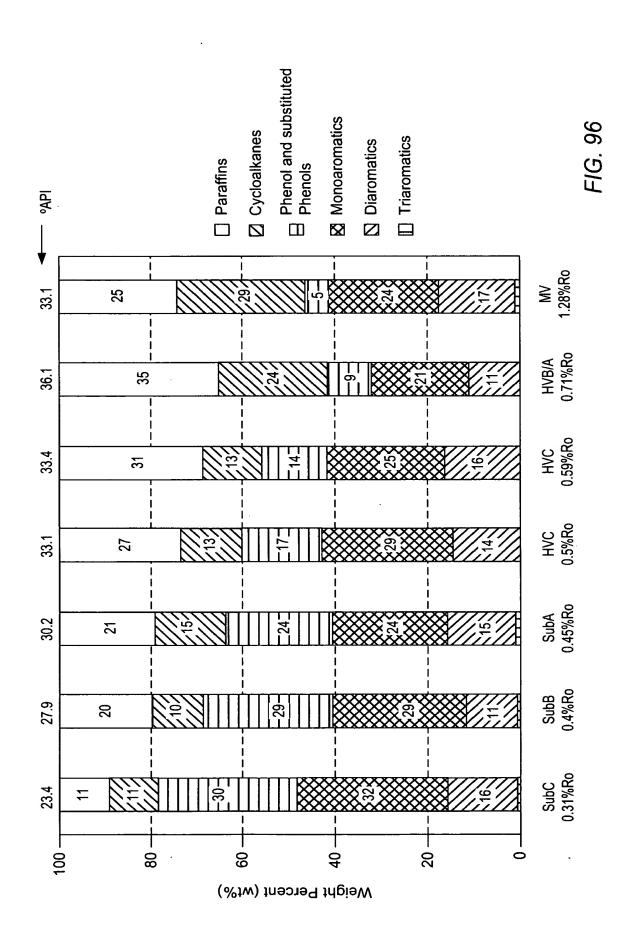
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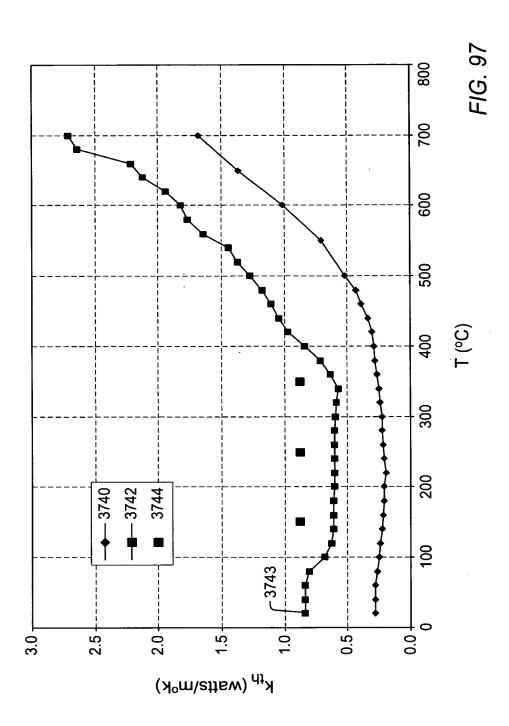
Inventors: Vinegar et al.

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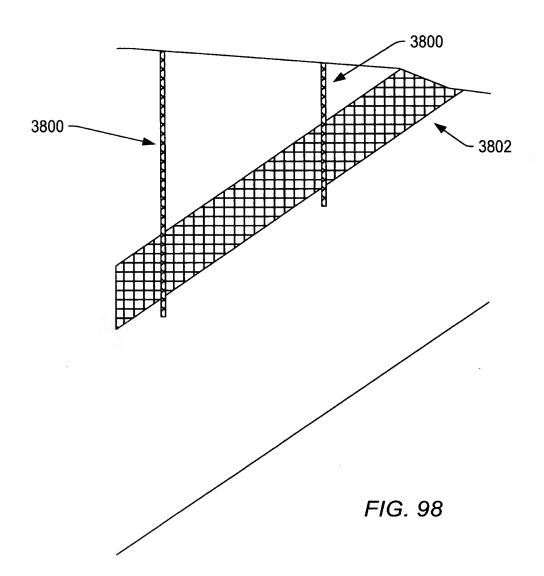


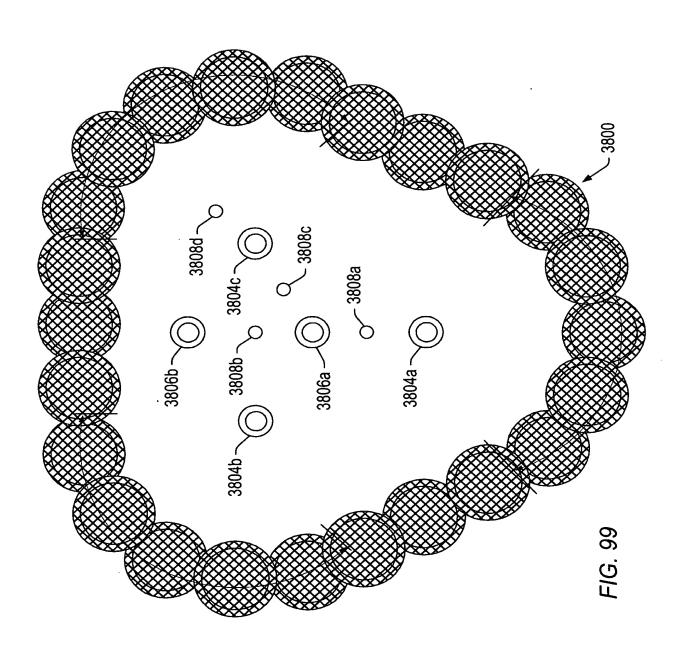
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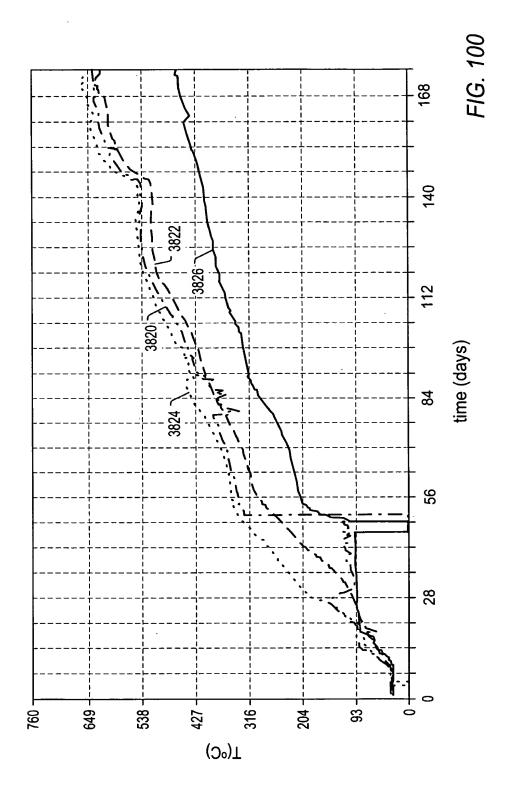
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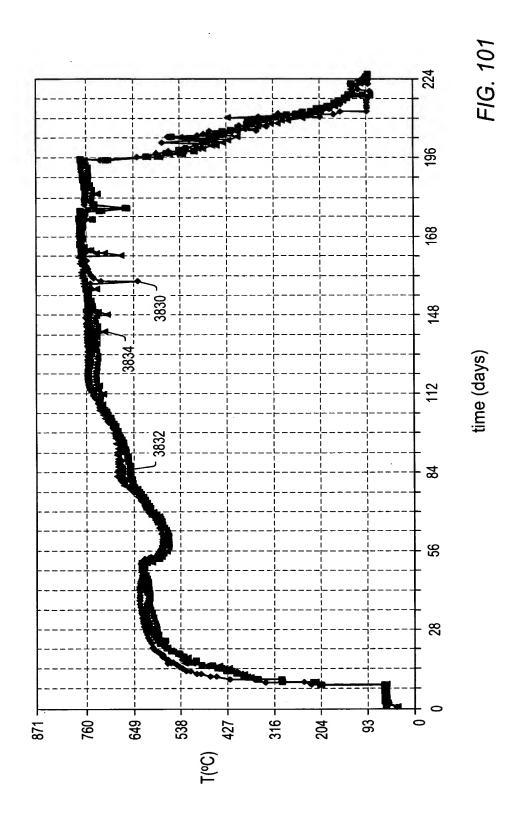


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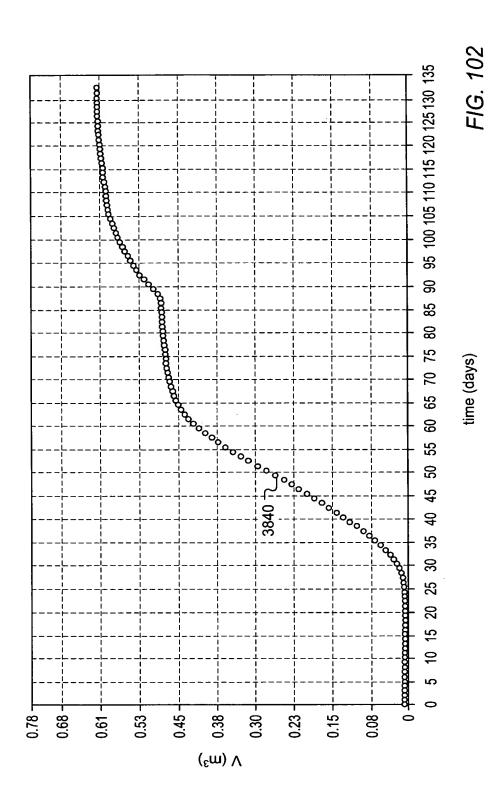






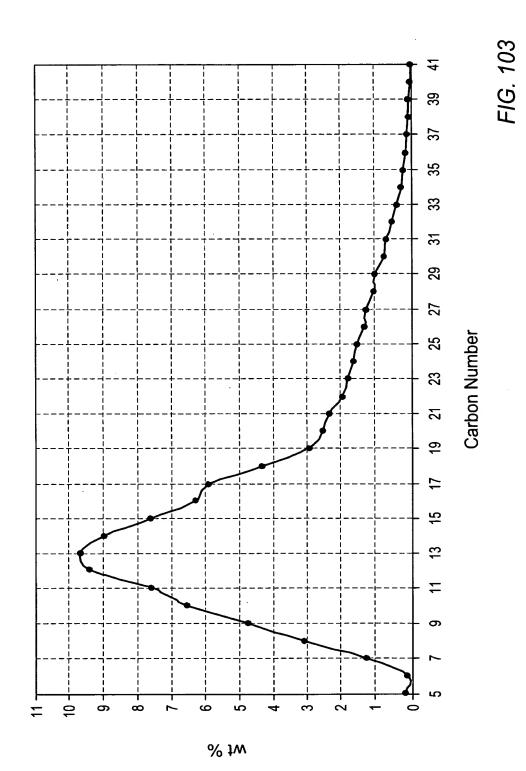
Inventors: Vinegar et al.

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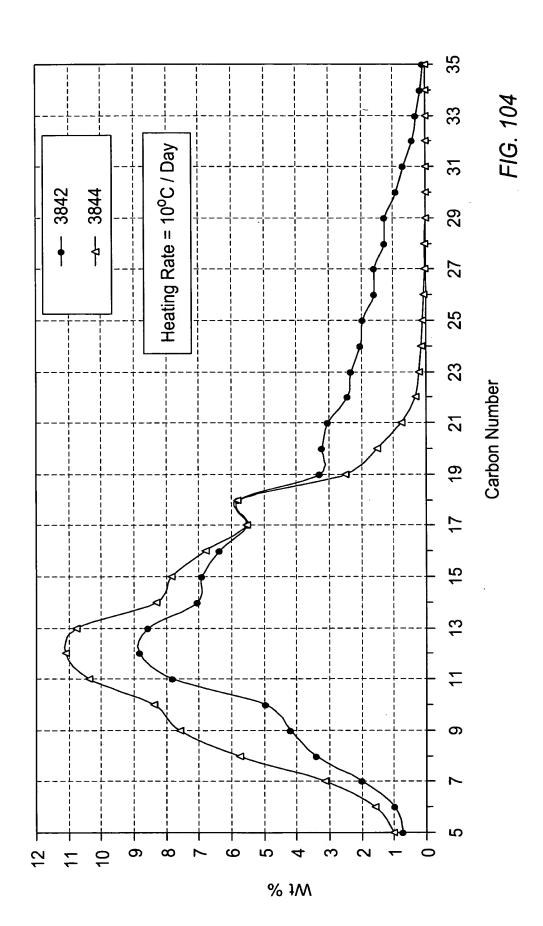
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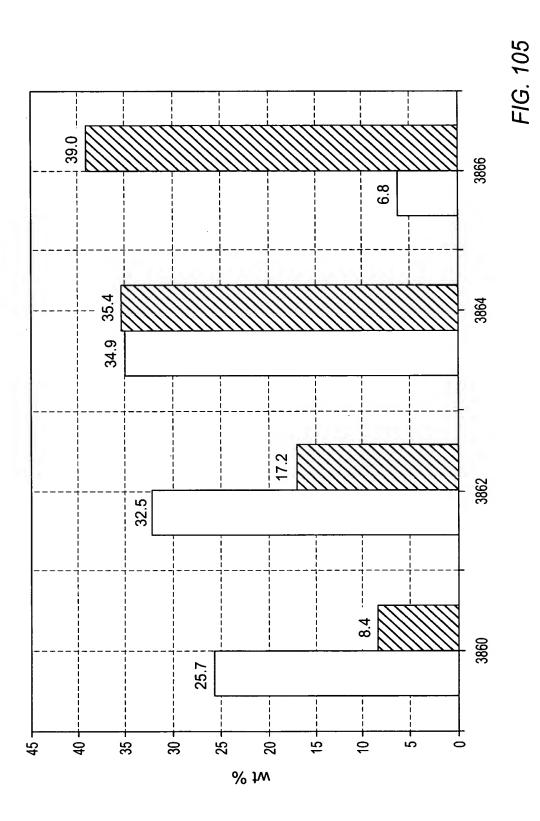
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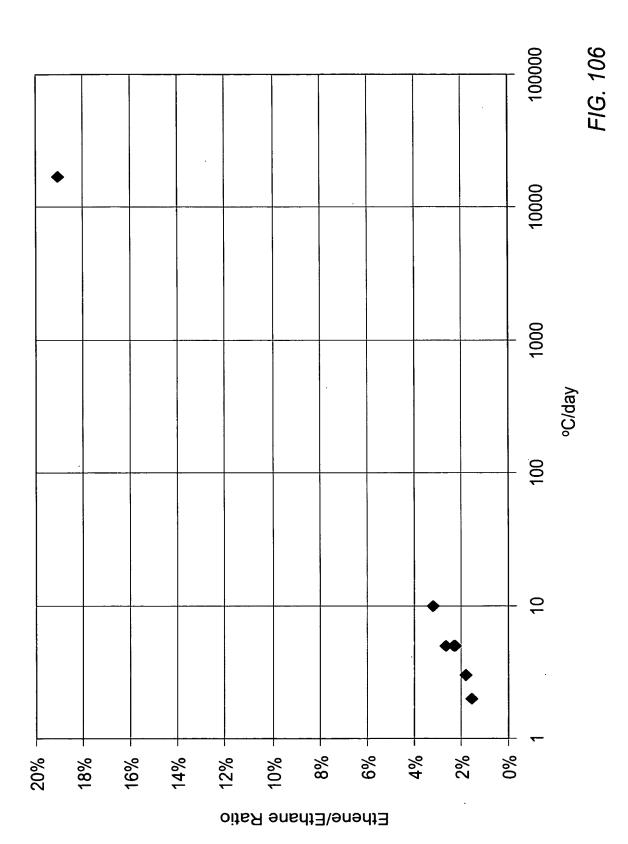




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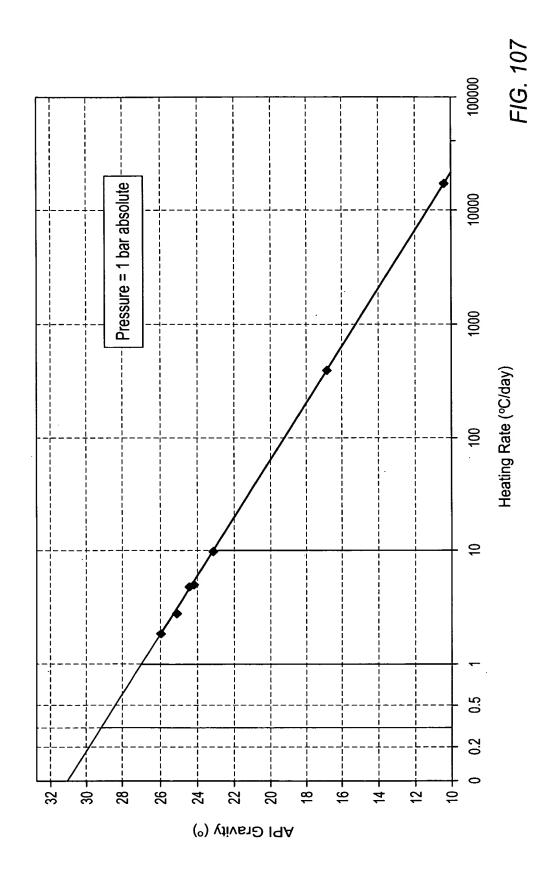
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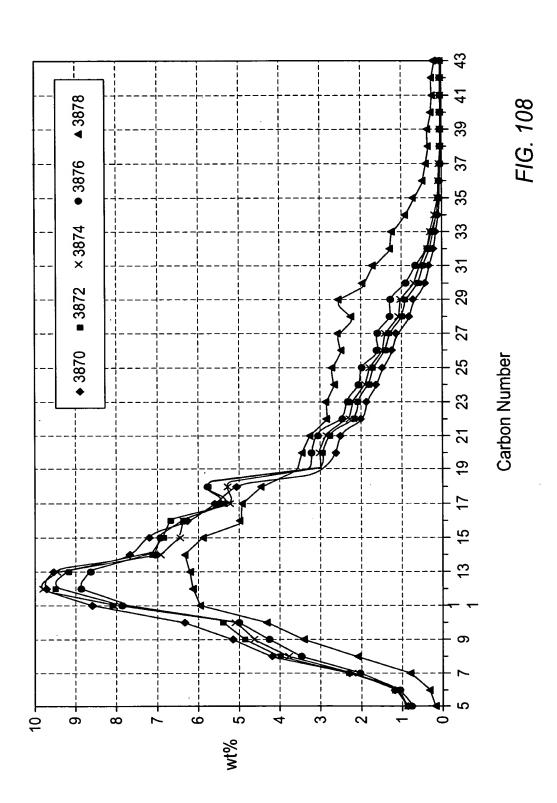
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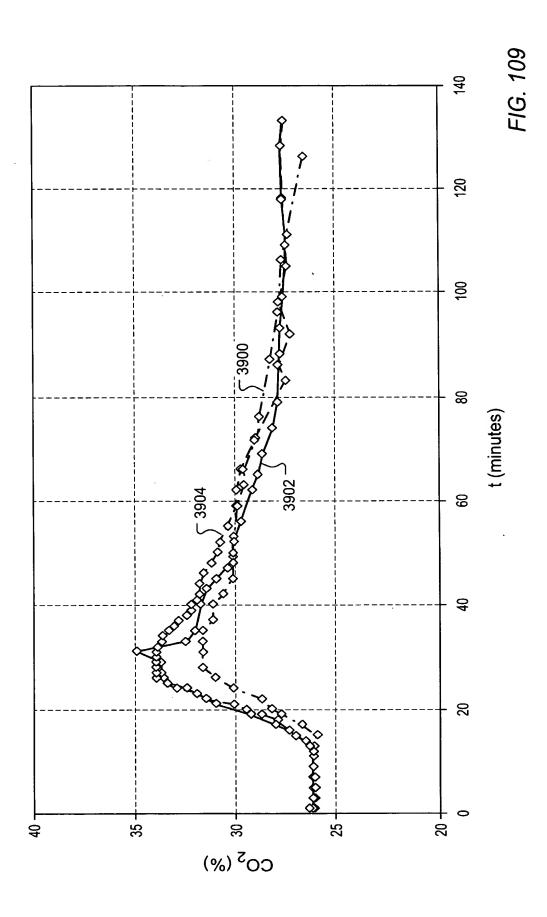
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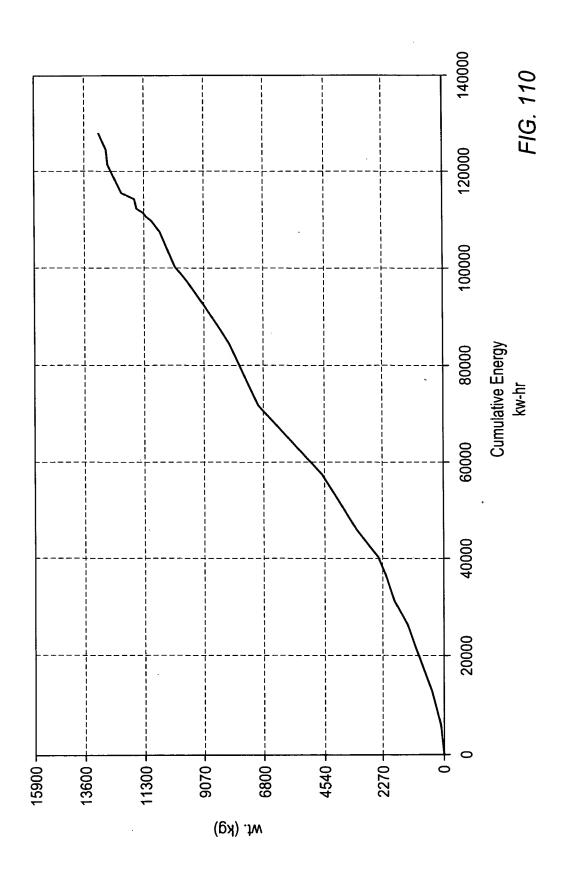
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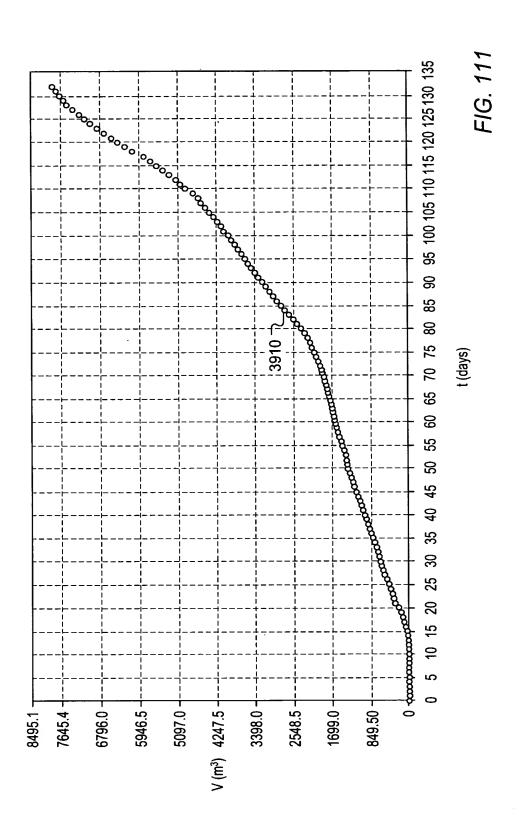


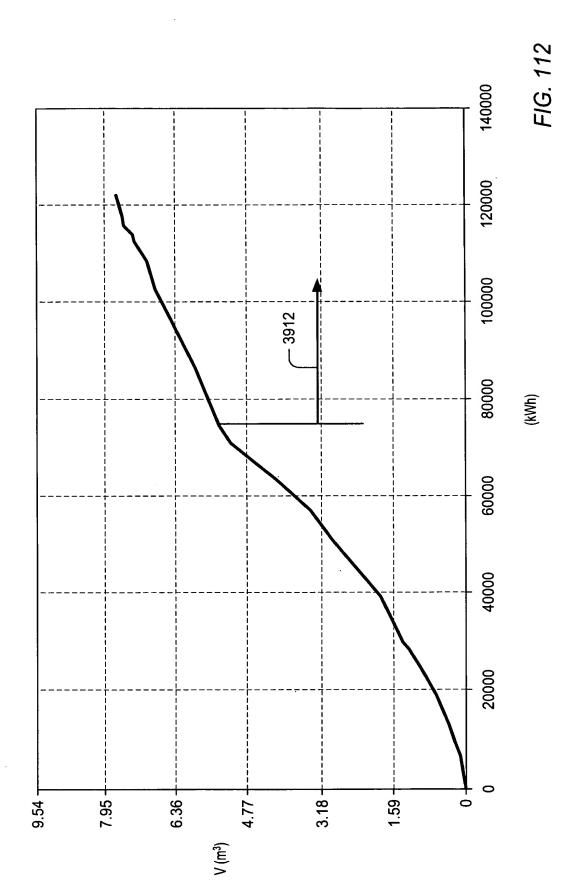
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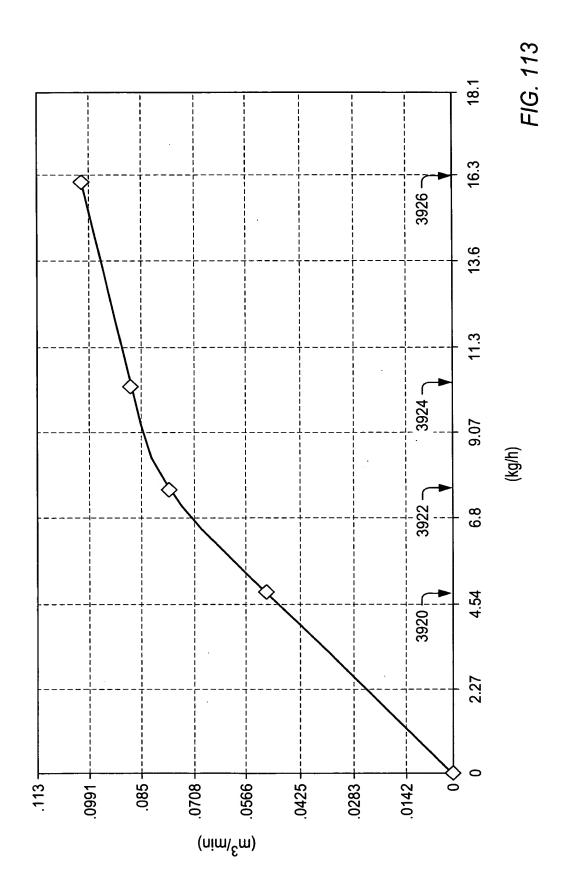
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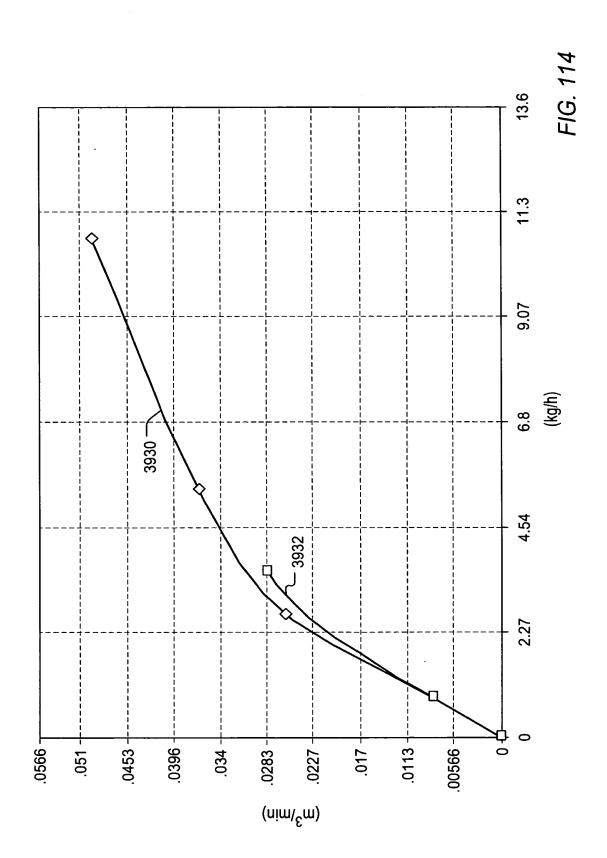




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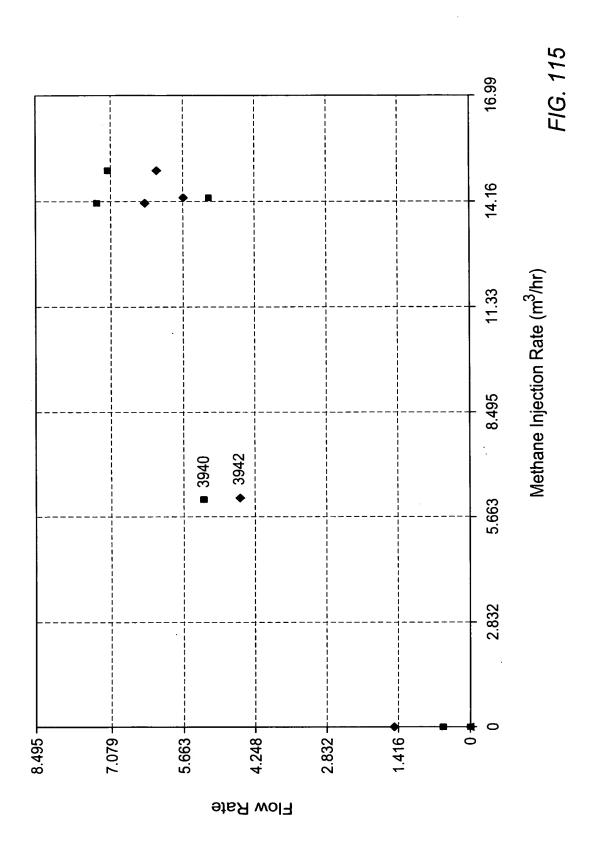
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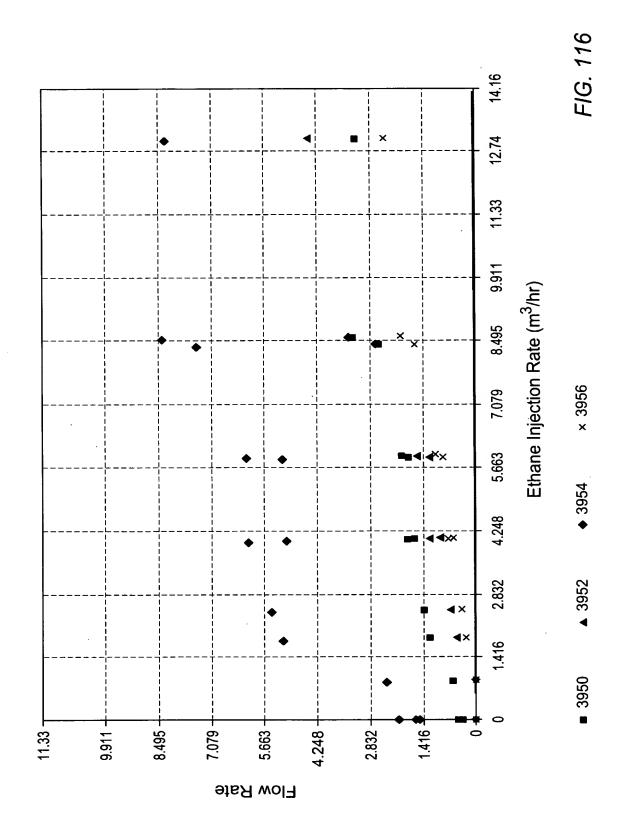


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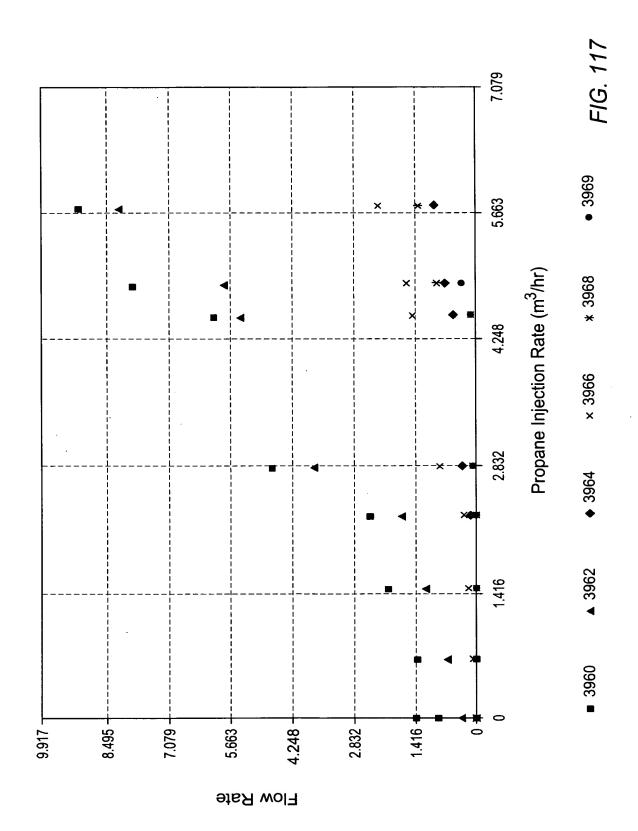


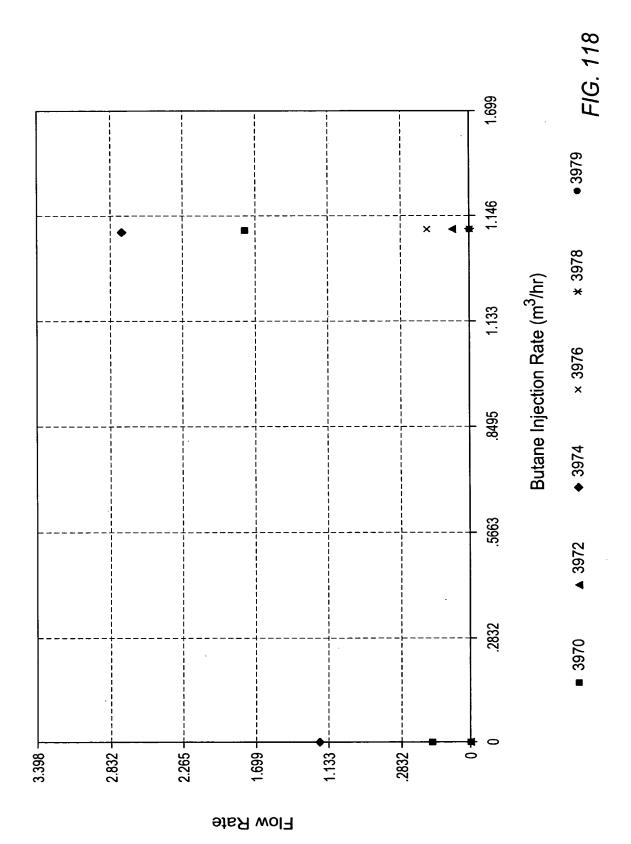
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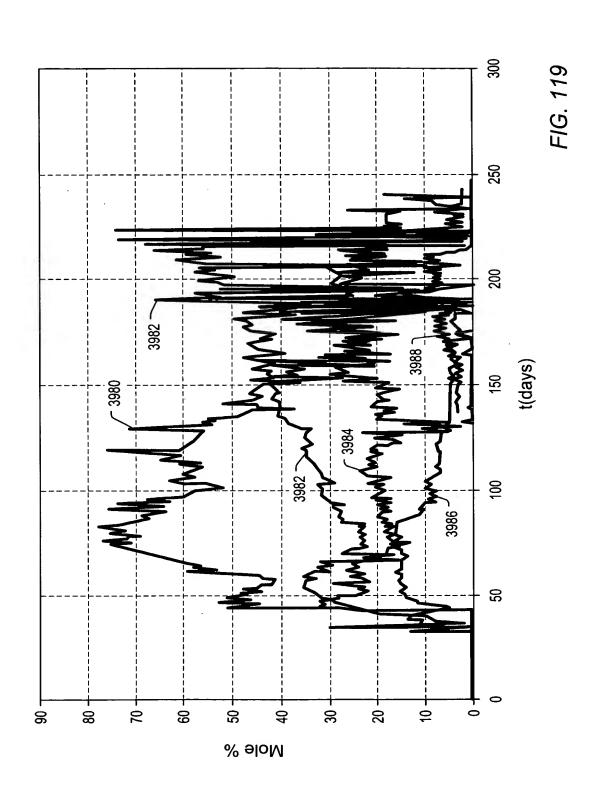


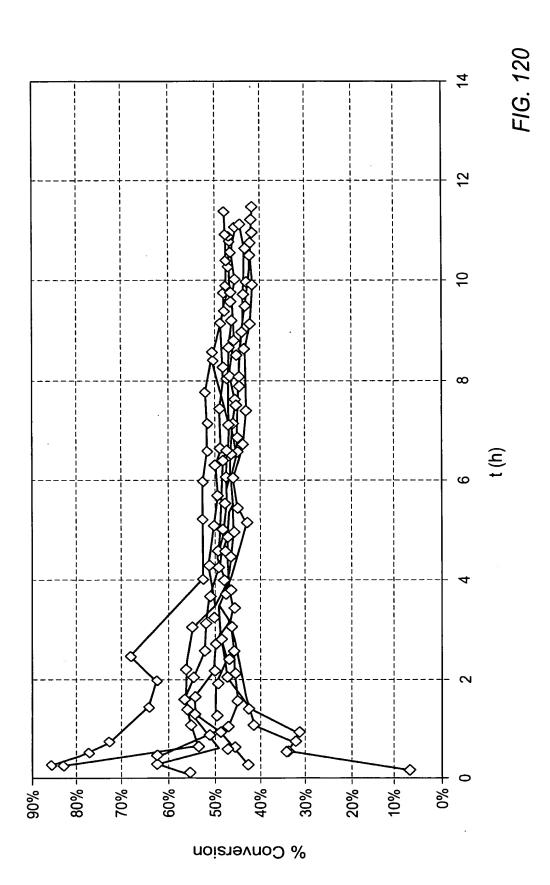
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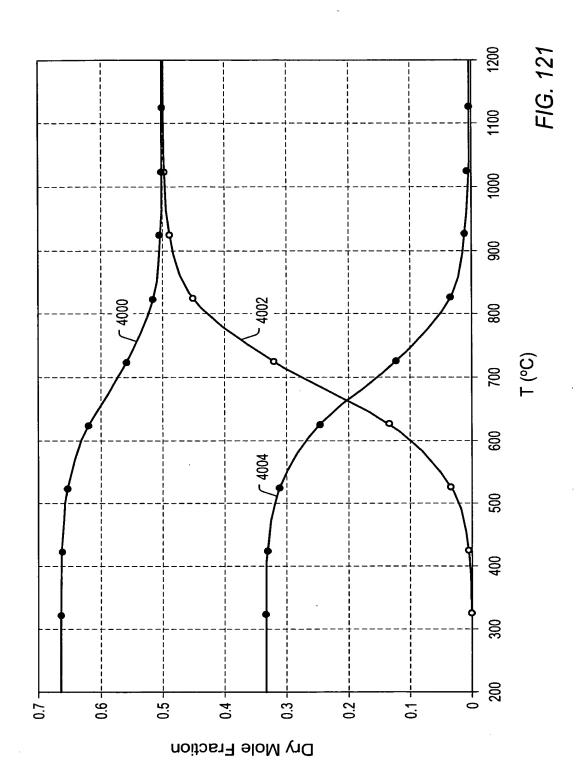


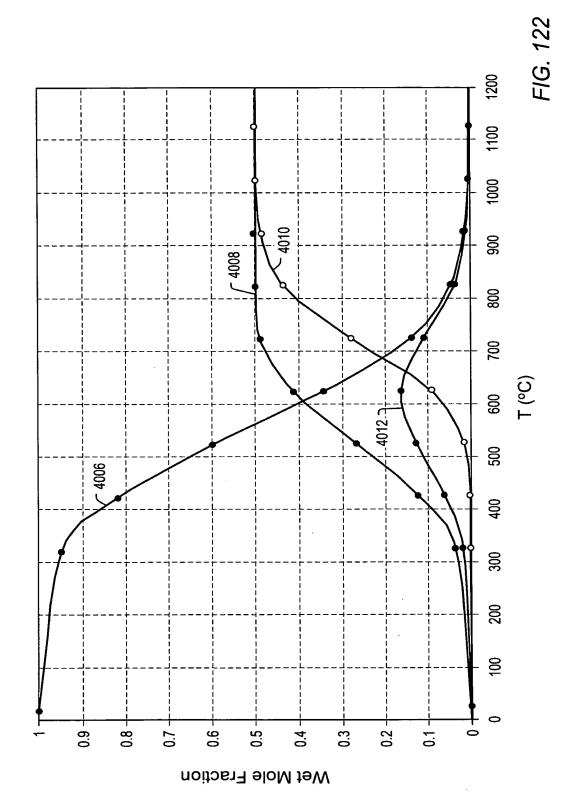


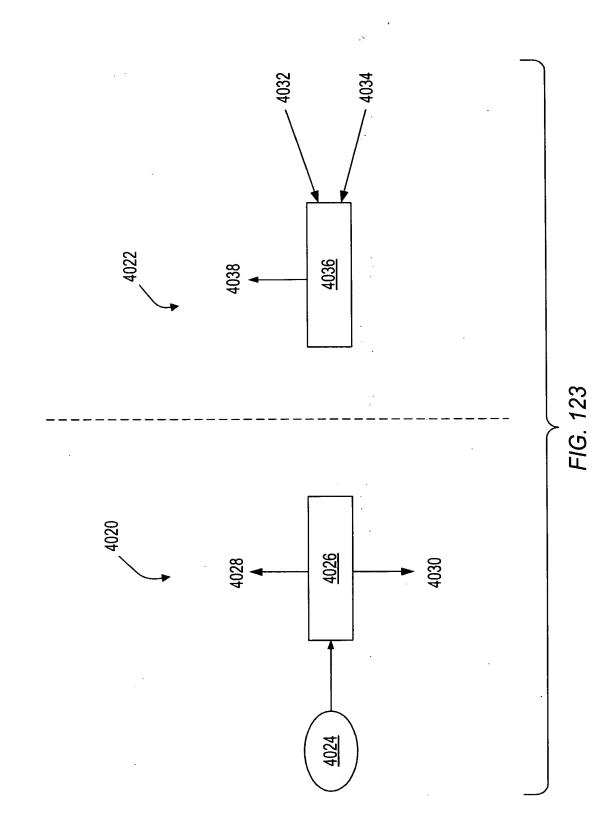


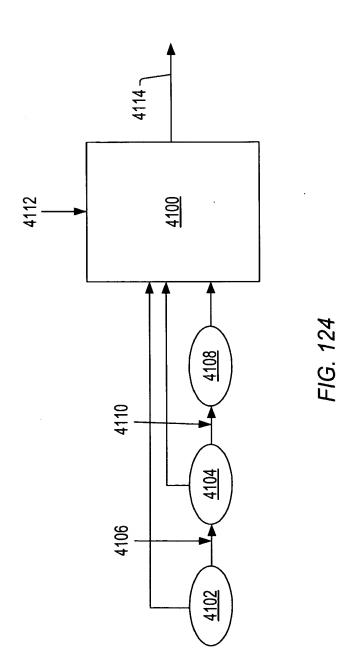


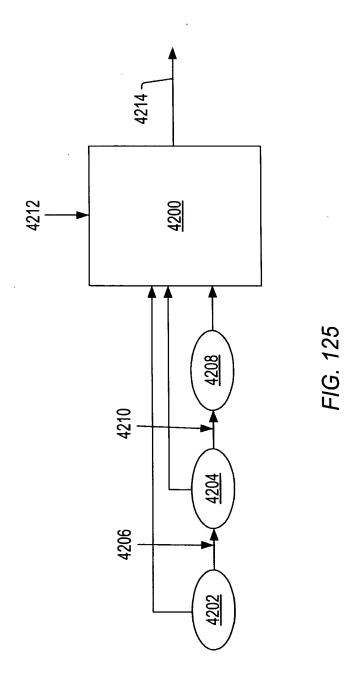
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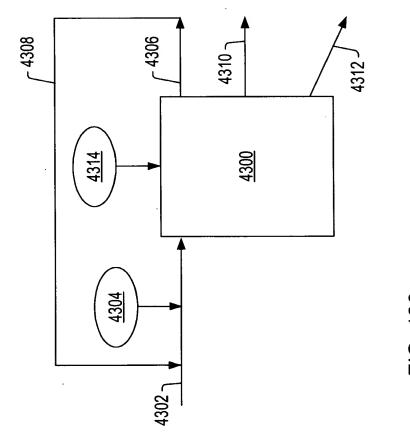






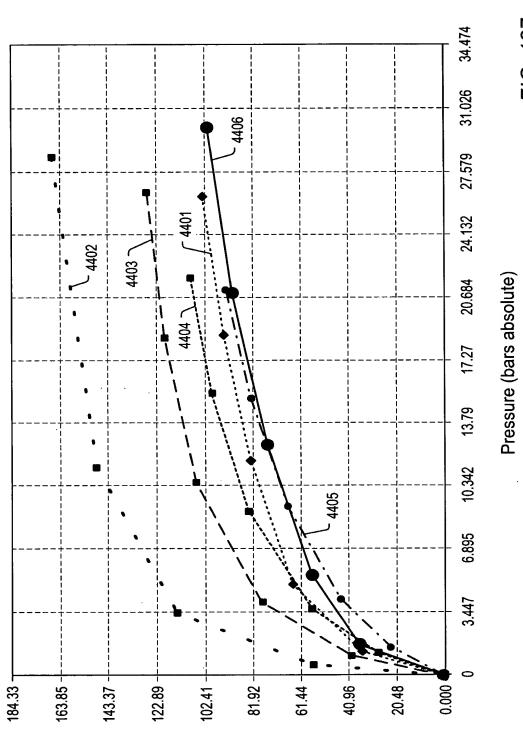






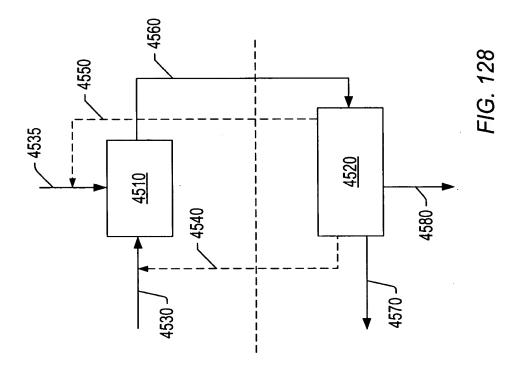
Inventors: Vinegar et al.

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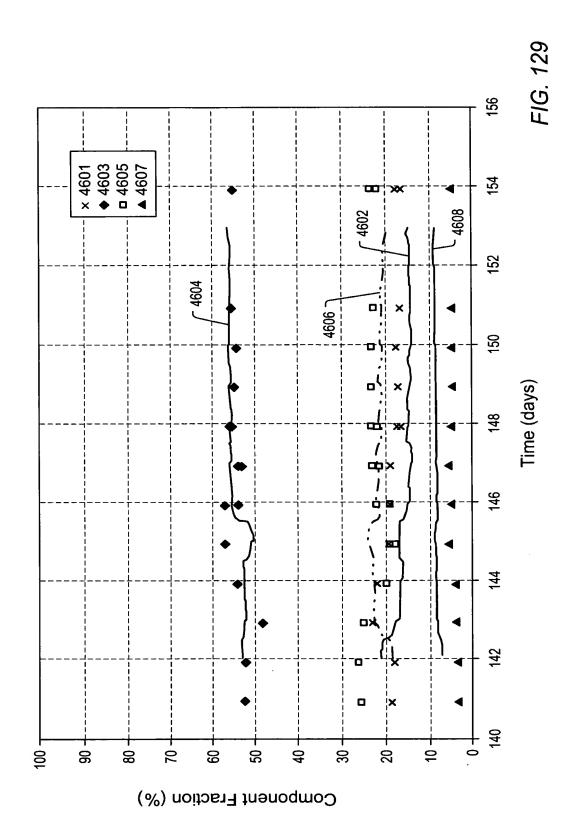
Cumulative Sorbed (m^3 /metric ton)

FIG. 127



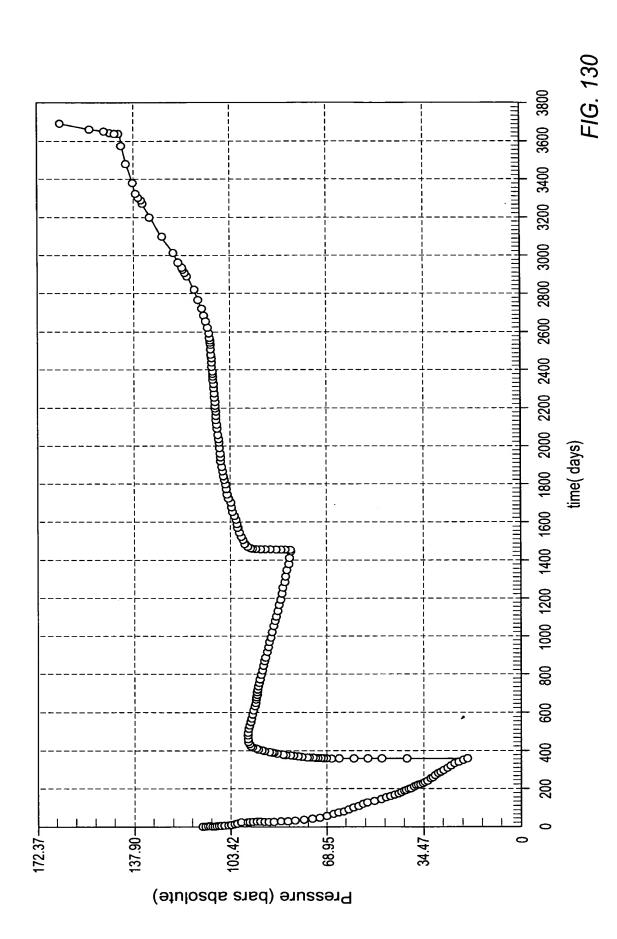
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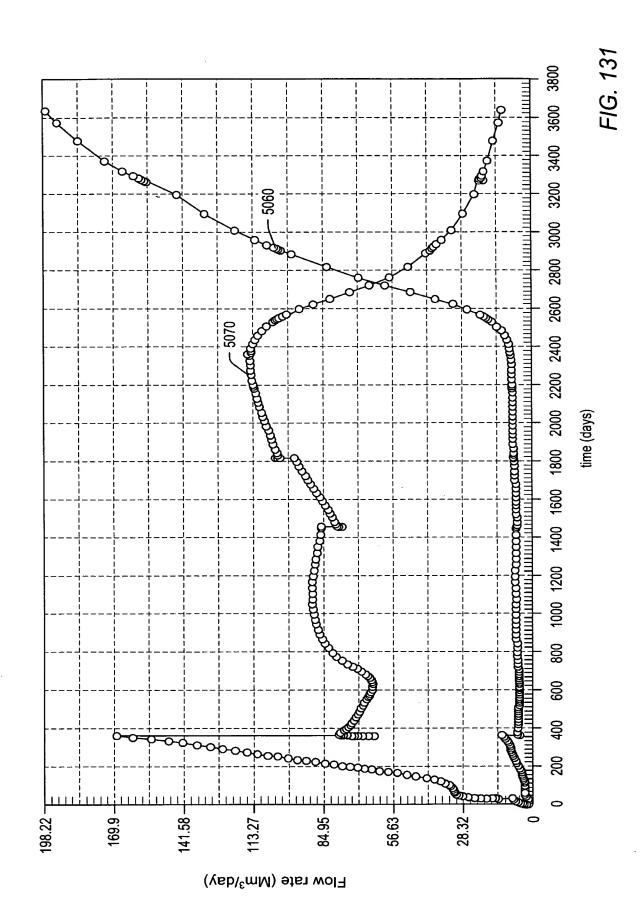
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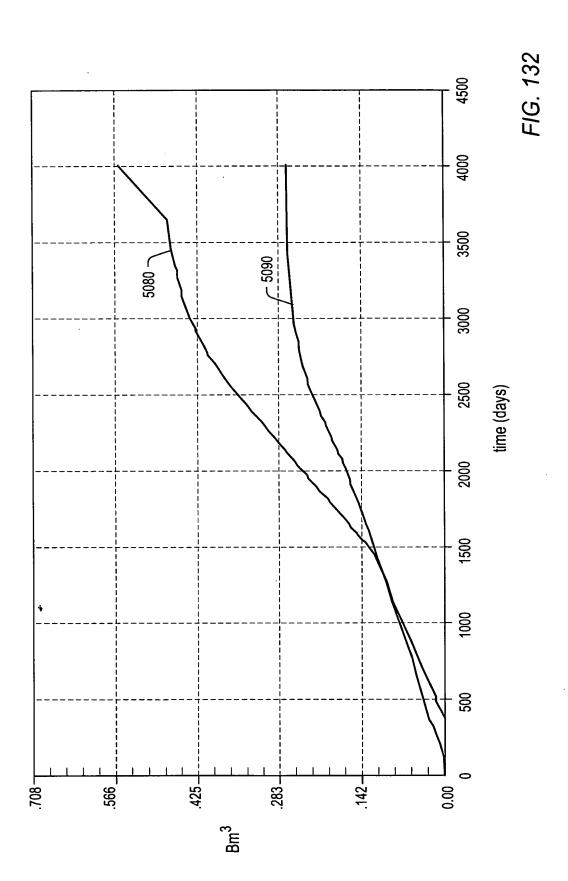
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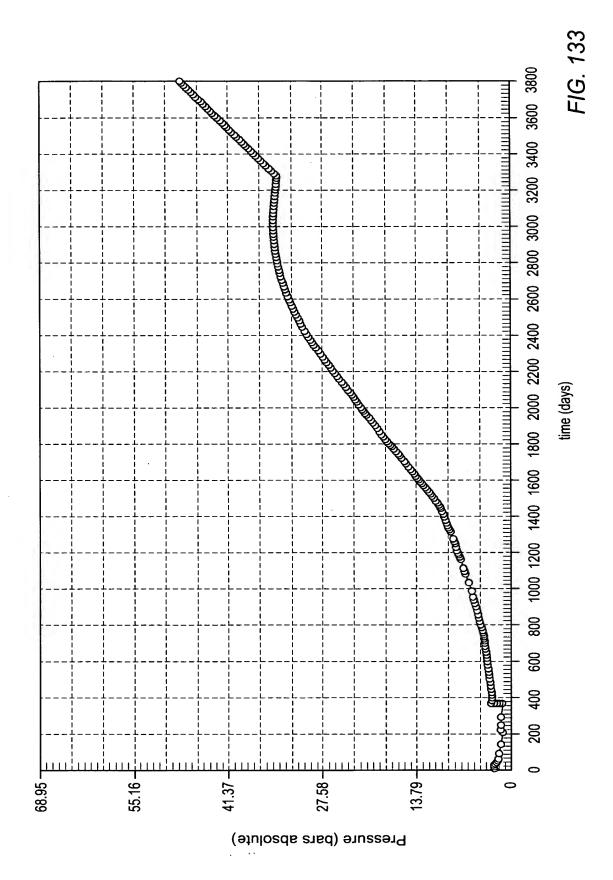
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